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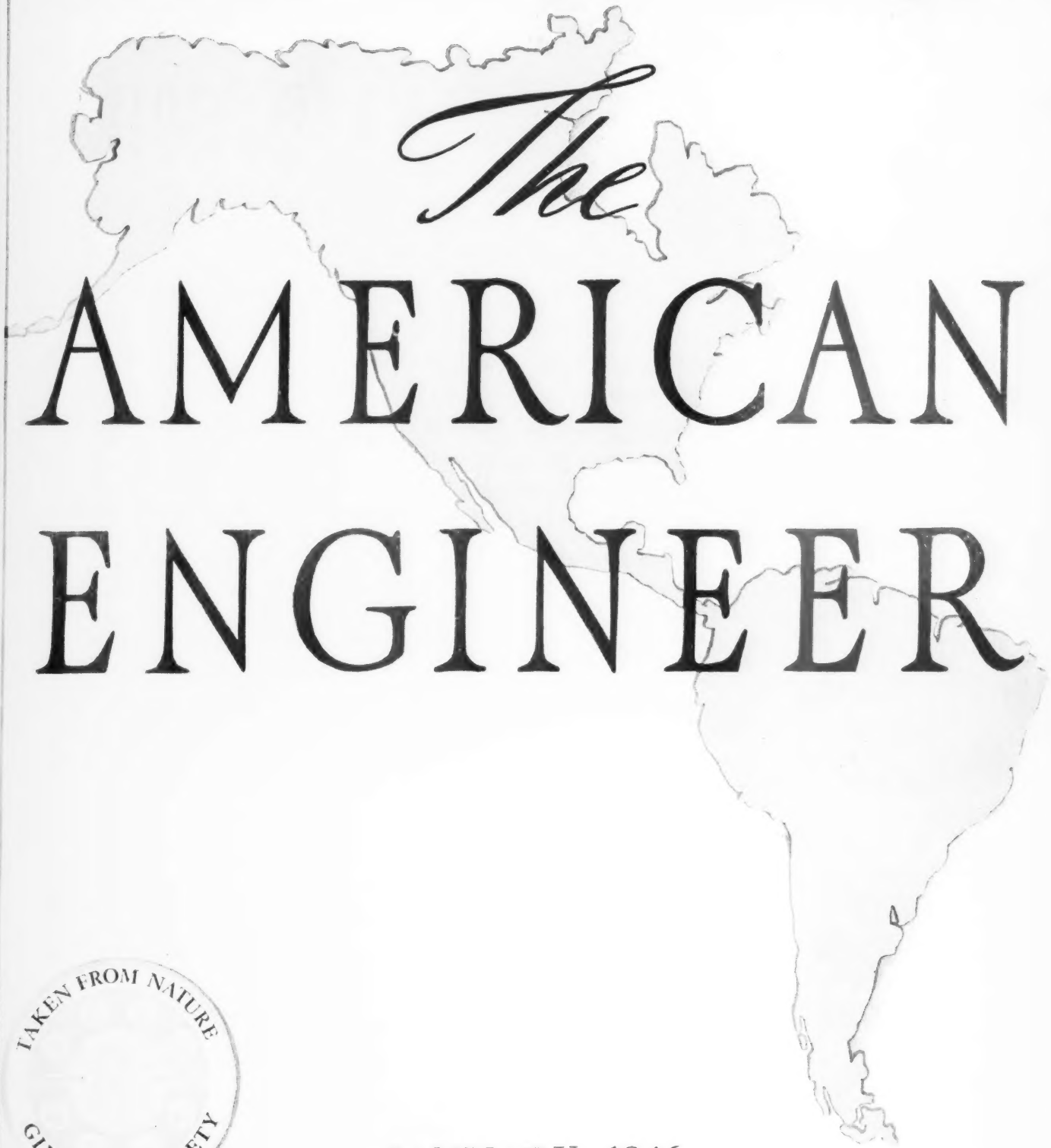
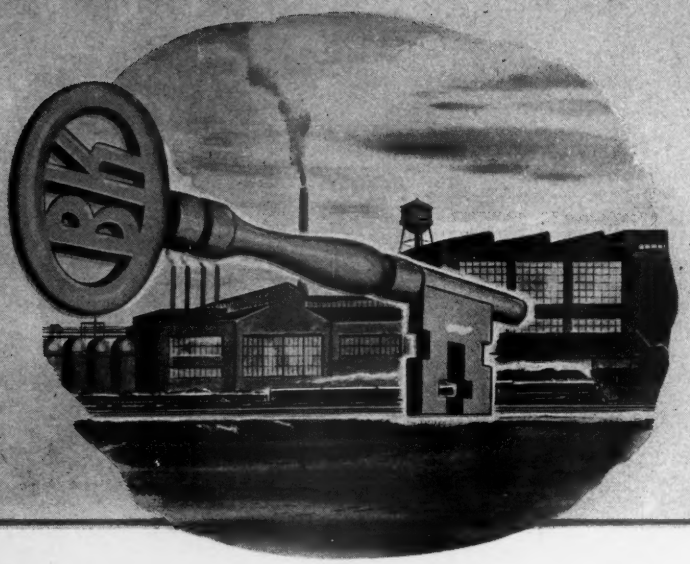


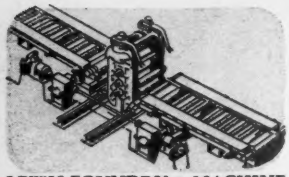
The AMERICAN ENGINEER

TAKEN FROM NATURE
GIVEN TO SOCIETY

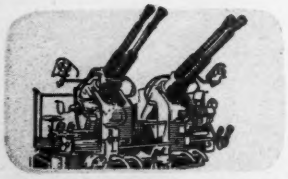
JANUARY, 1946



The Key Called "KNOW-HOW!"



LEWIS FOUNDRY & MACHINE DIVISION . . . Rolls and rolling mill machinery.



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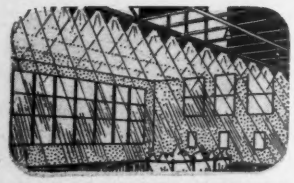

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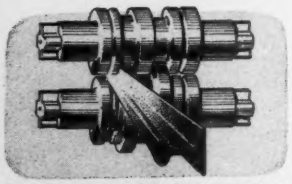

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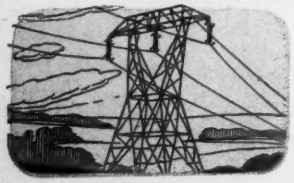

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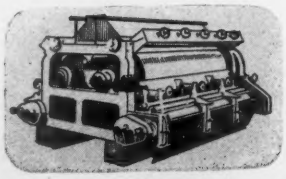

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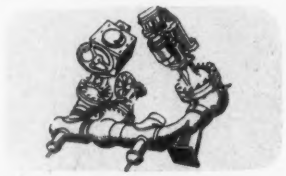

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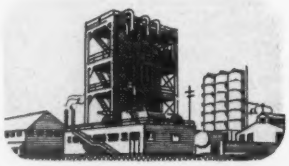

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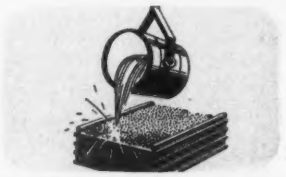

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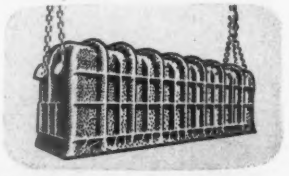

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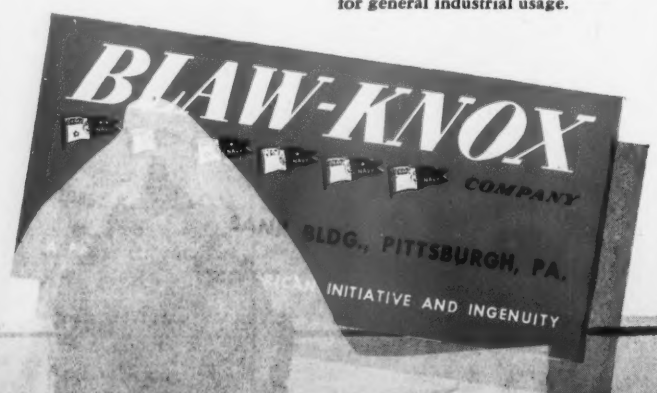

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The National Society of Professional Engineers

National Officers—1946

RITCHIE LAWRIE, JR., *President,* Born—Edinburgh, Scotland, 1890. Educated Carnegie Inst. Technology. Member—Firm of Lawrie & Green. District Manager — W. P. B. Past President—Penn. Society P. E. Active—Civic Affairs and Service Clubs.

New York

JAMES F. FAIRMAN, *Vice-President,* Born Michigan. Educated Univ. Mich. Former President New York S.P.E. For many years with Consolidated Edison Company, of N.Y.C., recently promoted to position of vice-president.

Minnesota

ALEX VAN PRAAG, *Vice-President,* Born Minnesota. Educated Univ. of Ill., and James Millikin Univ. Served as 1st Lt. U. S. Army, World War I. Past president Illinois Society of Engineers. Now Consulting Engineer, Decatur, Illinois.

Georgia

STEPHEN C. HALE, *Vice-President*—Born New York. Educated Cornell Univ. Active in civic affairs. Past President and one of organizers of Georgia Society of Professional Engineers, Now Chief Engineer with Fulton Bag and Cotton Mills, Atlanta.

Washington

WM. L. THRAILKILL, *Vice President,* Born—Bitter Root Valley, Montana. Educated — Univ. of Washington. Asst. General Manager — Washington Water Power Co. President—Washington Society P. E. Director—Washington Society P. E. Active in Fraternal Societies.

LEO H. CLEARY, *Treasurer,* Born —Connecticut. Educated Catholic University. Now Consulting Engineer, Washington, D. C. Former President — District of Columbia Society P. E. Present Treasurer—N.S.P.E. Member—Numerous Technical Societies.

National Society of Professional Engineers Installs New Officers For 1946 at Its Eleventh Annual Convention in Cleveland

Very Successful Year Just Completed — Enthusiasm Expressed for Newly Implemented Organizational Structure — Healthy Growth in Membership Recorded — Prospects For Early Progress Toward Overall Objectives Encouraging

The Ohio State Society jointly with the Cleveland Chapter, acted as hosts to the officers and delegates gathered to attend the Eleventh Annual National Convention of the NSPE, at the Carter Hotel, Cleveland, December 7th and 8th. And royal hosts they turned out to be.

The convention program was planned and all details organized in a way to compress a lot of hard work and serious business into two busy days. The Board of Directors met morning and afternoon on Friday, and again Saturday afternoon. The Annual Convention meeting of the delegates, which installed the new 1946 officers, was held Saturday morning, December 8th.

Good Publicity

The final meeting of the 1945 Executive Committee convened Thursday, Dec. 6th, as a prelude to the Convention and meeting of the Directors, preceding the convention sessions. Friday morning there was a panel discussion over Station WTAM, participated in by Ritchie Lawrie, Jr., Harry E. Nold, Samuel I. Sacks and G. Brooks Earnest. The topic was: "The relation of the Engineer to the Society of the future." Cleveland newspapers gave excellent coverage of the Convention, thanks to the very efficient work of that Chapter's Publicity Committee.

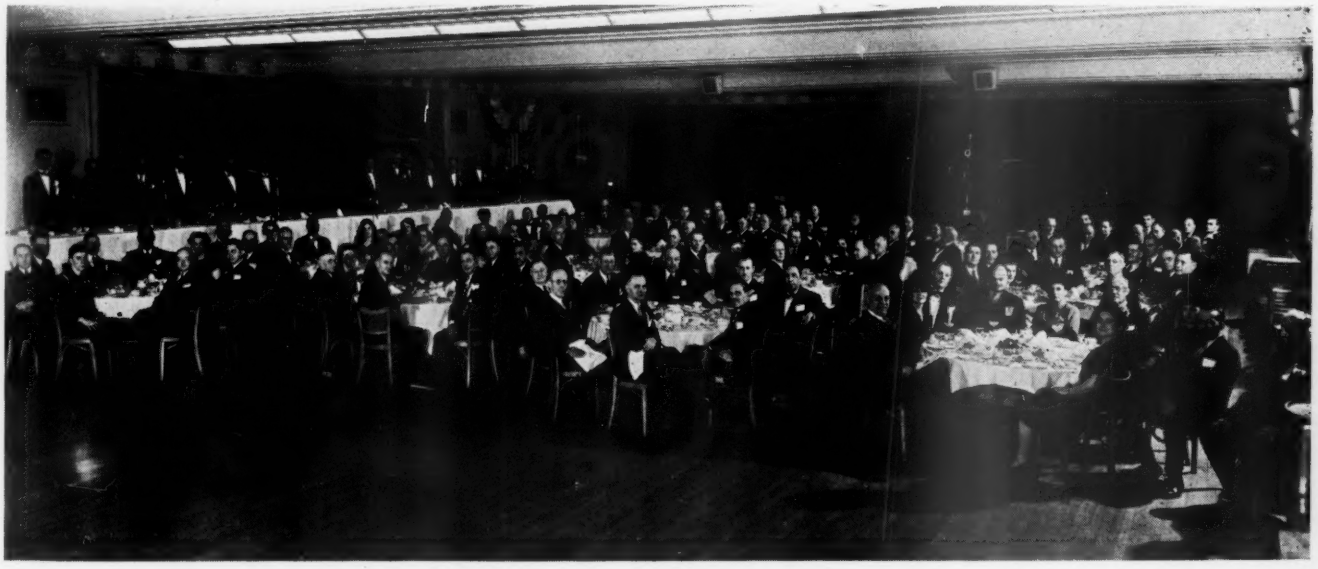
At 10 o'clock Friday morning the first formal meeting of the Board of Directors got underway, with Professor Harry E. Nold in the chair. After two busy sessions of the Board, morning and afternoon, of the Professional Engineers, Officers, Delegates, Directors, visitors and their friends and members of their families, gathered in the spacious ballroom of the Carter Hotel for the Banquet meeting at 6:30 o'clock.

Among the highlights of this occasion was the formal presentation of citations for outstanding service to the Engineering Profession and to society, which honored two members of the Ohio Society. One of these went to Professor Harry E. Nold, the retiring president of the NSPE, and the other to Harvey R. Hawgood, a resistered Professional Engineer, and attorney, and a member of the Cleveland Chapter. The address of Colonel Blake R. Van Leer, President of Georgia School of Technology, is reproduced in this issue of the American Engineer.

Officers Elected

The report of the Tellers' Committee, in charge of the record of the voting for National Officers for 1946, was delivered to the Convention of Delegates on Saturday morning. This report showed the following slate elected by the votes of the membership by more than 2,000 to one:

For President, Ritchie Lawrie, Jr.,



Scene in the Grand Ballroom of the Carter Hotel, Cleveland, on the evening of Friday, December 8th, 1945, showing the Professional Engineers and their guests assembled for the Annual Banquet, at the Eleventh Annual Convention of the National Society of Professional Engineers.

Left to right, Harvey R. Hawgood, and Harry E. Nold, holding the engraved Citations presented to them by the Ohio Professional Engineers as a recognition of their outstanding service to the Engineering Profession and to society.

of Pennsylvania;

For Treasurer, Leo. H. Cleary, of Washington, D. C.;

For vice-president, Northeast zone, James F. Fairman, of New York;

For vice-president, Central zone, Alex Van Praag Jr., Illinois;

For vice-president, Southern zone, Stephen C. Hale, Georgia;

For vice-president, Western zone, William L. Thrailkill, Washington.

The list of officers elected is identical with the recommendations of the Nominating Committee whose report appeared in the September American Engineer, together with a brief biological sketch of each candidate.

The Treasurer's report showed receipts to Nov. 30th, $42,929.92; expenditures $39,542.08; balance on hand $3,688.24.

The 1946 Executivve Committee is composed of Ritchie Lawrie, Jr: Jas. F. Fairman; Leo H. Cleary; R. W. Allen; S. L. Stolte; and Hugh C. Clarke.

Following the acceptance of this report of the Balloting Committee, Mr. Nold turned over the gavel to the incoming president of NSPE, Ritchie Lawrie Jr.

Membership Growing

Figures on membership in the National Society of Professional Engineers, as of November 30th, 1945, show a total of 10,764, as against 8,651 twelve months previous. One fact indicating the healthy nature of the membership increase is that the number of members reported delinquent in the payment of their dues, is substantially less than it was one year ago. The net increase in fully paid-up members over the figure for November 30th, 1944, is 2,220.

Membership drives are in progress in many of the State Societies, with the returns already coming in indicating that 1946 will show the largest gain in membership ever recorded by the Society.

Space will not permit printing all the encouraging reports which were presented to the Convention. It cannot too strongly be urged, however, that every reader of the American Engineer take the time to read and study, especially the reports of the Legislative Committee, the report of the Joint Committee of the National Council of Engineering Examiners, the Report of the Fact Finding Committee on Collective Bargaining, and the Policy Committee reports, which appear in the American Engineer. Special attention should be called to the address of Colonel Van Leer, which no Professional Engineer can afford to miss.

A Fine Spirit Evident

We have referred to the large volume of business which was handled by the Board of Directors and by the delegates assembled in Convention. In this respect the Cleveland meetings were outstanding. But these Professional Engineers did more than work —they conferred—they got better acquainted—there was a great deal of enthusiasm evident everywhere—there was good-fellowship—the renewing of old and the cementing of new friendships.

In every way it was a Great Con-

(*Continued on Page 7*)

Engineers Discussion Panel, Broadcasting over the NBC system from Cleveland, on the morning of December 8th. Left to right: Professor G. Brooks Earnest, of Case School of Applied Science, Cleveland; Prof. Harry E. Nold, retiring president of the NSPE; Samuel I. Sacks, civil engineer and attorney, of Philadelphia, and Ritchie Lawrie, Jr., newly elected president of the NSPE.

The Engineering Profession's Responsibility to Society

By Colonel Blake R. Van Leer
President, Georgia School of Technology

This address by Colonel Van Leer was in many respects the most outstanding single event of the eleventh annual convention of the National Society of Professional Engineers in Cleveland, December 7th and 8th. His topic could not have been better chosen for the occasion and for the needs of Professional Engineers at this critical period. No other speaker, perhaps, could have brought home as clearly, forcefully and eloquently as did Colonel Van Lee, the extent and critical nature of the Professional Engineers Opportunity as well as his responsibilities for making this America of ours the kind of a place in which to work and live that obviously God and Nature intended it should be.

Colonel Van Lee obtained his Bachelor of Science and Electrical Engineering Degree at Purdue; his Master's Degree in Mechanical Engineering at California, and Doctor of Engineering Degree at Purdue. He comes to Georgia Tech from the service of the Army, where he was Chief of Facilities Branch, Army Specialized Training Division.

The Colonel is a registered Engineer in Florida and North Carolina, and is a member of the Georgia State Society of Professional Engineers. He is also a member of a large number of technical and other societies too long to mention here. Needless to say, he is thoroughly "sold" on the present urgent need of an overall Engineering organization.

Colonel Blake R. Van Leer

Convention Story

(*Continued from Page 6*)

vention—really an Historic event in the history of the Engineer Profession in America. Engineers are becoming awake—awake to the vital importance of their contribution to the past and future upbuilding of America—awake to their power for good, once they are able to complete the building of an overall organization to represent ALL Professional Engineers in their dealings with government at all levels.

The Professional Engineers of America truly have a rendezvous with destiny—and there is evidence they are becoming aware of that fact. May God give more power and more vision to their leadership!

I am very happy to be with you this afternoon, and I bring you greetings from the South and particularly from Atlanta. I feel very much at home, because I see a good many friends around here. Jack Kennedy, who used to serve with me in the 316th Engineers; A. W. Kimmel, who taught me the rudiments of infantry drill at Purdue University a good many years ago; and I have even got my friends here, Professor King and Steve Hale. When I get through with this talk I hope Hale has to catch a train, because he has had me on one of his committees down there all year and I haven't done a confounded thing. He is going to probably tell you that this is a lot of hooey that I am giving you in this talk.

Engineers Need Single Spokesman

Now, we in the South want this organization to prosper, and I think that is true all over the country. Yesterday I was with a group of Deans of Engineering, and most of us have become convinced that if we are ever to have a united engineering profession and have some agency that can speak to the engineers as a whole, it must be through the means of this organization here.

We have tried all kinds of other schemes and they just have not functioned, and as long as human nature is as it is I doubt if they ever will function, and as far as I am concerned I am hitching my star, as it were, to your wagon. I believe that we do have hope of having a united engineering profession through the medium of the National Society of Professional Engineers.

So you have a great responsibility. Not only do you have a responsibility to this organization, which throughout the years has grown very steadily and very healthily, but you have a responsibility to the engineering profession at large.

Engineering Defined

Now, being a college professor, I started out in this talk to very carefully define these various things that I was going to talk about. I gave a rather broad definition of "the engineering profession" as "those who are trained in the knowledge and science and skill of engineering who offer an intellectual service or advice or counsel for a recompense, and are legally authorized to engage in their profession under the laws of the state in which they work." In other words, that includes all the men who are registered with the State Boards of Engineering Examiners in this country.

Now, the "Society," as I use it in this talk, is broadly used to include all the people within our country, regardless of race, color, profession, wealth, responsibility or previous condition of servitude. In other words, it is a society in general as we usually think of the term.

"Responsibility" I use in its ordinary sense. It connotes the duty or obligation which one raised under Christian morals and English Common Law feels should be fulfilled, regardless of the written letter of the law. "Responsibility," you see, in this sense takes on the meaning of conscience.

It is the feeling that we have that we ought to do a given duty and we ought to comply with a given law, regardless of how we may be able to squirm out of it due to technicalities. Our professional responsibility is, therefore, an ethical and a moral duty which we shirk, then, only at our peril. That is our personal, moral, legal and professional peril.

Need Sense of Responsibility

Now, if our professional responsibility does not weigh heavily on our conscience as a profession, it is my personal opinion that it would be better if a millstone were hanged about our necks and that we as a group be cast figuratively and really into outer darkness.

My theme to you, therefore, is that we have a large and great responsibility to Society and that we must ever and always constantly look to that responsibility.

Responsibility, of course, which we most often consider and which has been presented to you in many, many ways by many, many different men and about which throughout the years there have been articles running in your magazines, is our responsibility to the engineering profession.

We as a group feel that we must not profess what we do not know. That is, if we are structural engineers, for example, we must not profess to be mechanical engineers. In other words, whatever we do, we must profess competency; we must have the "know how" of that particular thing. That has been emphasized over and over again before you in one way or another, and I think that the profession as a whole readily accepts that.

Specialization Implies Limitations

There are very few men now who think that they can do anything and everything, and they usually try to adhere reasonably well to the specialty in which they are competent. They do so, first, because their mistakes catch up with them; second, we know that as members of the engineering profession we must be honest and ethical in our dealings with each other. If we do not hold that tenet, if we do not have an honest and ethical attitude toward one another, then we, of course, run into very serious and grave consequences, and just as sure as we are in this room, if we are not honest with each other, then sooner or later we die as a profession, and I am sure we would all agree it is better so.

It is expected that the members of the engineering profession will be law-abiding.

Conform to Law

Now, with lawyers making our laws, administering our laws, interpreting our laws, and many times enforcing our laws, admittedly it is sometimes very difficult to be law-abiding and honest about these laws. But regardless of how difficult it may be, we must be honest about them and we should be, and we ought to be, law-abiding.

Lacey W. Coad

Some very wise men have said that whenever you find a truly great man, widely acclaimed by the multitude, if you look closely you find also, somewhere in the background perhaps unnoticed by most people, the figure of an extremely able and adroit woman who is playing a vital part in seeing that things run smoothly and on time.

Well, we had such an unobtrusive woman on the job also at the Cleveland convention of the NSPE, in the person of our charming and highly efficient manager of the Society's Headquarters' Office in Washington. She was at all times the indispensable settler of the ever-present "problems," and the "coordinator" of all sorts of things, always with a smile and a friendly word to everybody. The Convention very properly could have accorded a rising vote of "thanks" to Lacey W. Coad, for her energy, thoroughness, tact and know-how which helped so mightily in arranging the pre-convention plans as well as for providing the behind-the-scenes guiding hand during the meetings in Cleveland.

We also must be, of course, loyal to our profession. Now, we usually all profess that, but many of us, sometimes secretly, sometimes by innuendo, we run down another professional engineer. I doubt if we ever gain by that in the long run.

I believe that it would be much better—certainly all teachings and sales psychology tell you that it is much better—to stick to the continual praise of your own virtues, your own ability, and your own work rather than to attack somebody else's work. It is much better to insist that we build upon good foundations which are secure and the structures which we design will not fail, rather than to point out that somebody did build something that did fail in some structure that was not quite as good as it might have been.

Don't Tolerate Slackers

If an engineer proves unworthy of the sacred trust which we as fellow engineers impose in him, and which he accepts as a member of this profession, I think it better for us to kick him out of the profession. Now, that is admittedly difficult to do, but it is much better than trying to fight out our difficulties in the public, wash our dirty linen in public, and to engage in fights either in the newspapers or in our technical press.

Now, back to this question of abiding by the law. Of course, it is expected that every citizen, whether he is an engineer or not, will be law-abiding, and engineers usually are. They have a very fine record in that respect, and very rarely do you ever run into finding an engineer who runs shy of laws against the major crimes of murder, rape, larceny, and so on. Where we get into trouble is that we violate the traffic laws, registration laws, building codes, and all sorts of things that we sometimes get so provoked about that we look upon them lightly.

Engineering Based on Law

Law and order is the basis of our profession, and if we start tearing it down, even with traffic laws, even with building codes, sooner or later we get a society which is chaotic. The breaking down of these little simple laws is the first stepping stone to chaos and anarchy, and regardless of how much we may dislike it I am sure it will pay in the long run for us in our communities to support these petty laws—or get them changed, of course.

Now, I spoke also a moment ago

about the loyalty which we owe to the profession. We feel that pretty strongly. You know, Shakespeare said, "To thine own self be true, and it must follow, like the night the day, thou canst not then be false to any man." Well, we recognize a form of loyalty to our country, we recognize a form of loyalty to our religion, to our family, and most of us to our alma mater, to our lodges, to our clubs, but on the whole engineers feel very lightly their loyalty to their profession.

We must correct that. It is going to take a long while. It isn't going to be done today or tomorrow or the next year. We simply have to keep working at it.

Where Engineers Fail

What has prevented the engineers from forming and building a large, solid, strong, united profession? We usually attribute this failure to many contributing factors, but rarely do we assign it to the real one, and that is the lack of loyalty to the profession.

We must build up a sense of pride in our profession, a feeling of unity; and in unity, of course, there is strength.

For years, as I said to begin with this talk, I have observed the operations of the engineering profession. I once had worked for an organization which attempted to do what you have the opportunity now of doing, the American Engineering Council.

I could talk at great length as to why that Council failed and disappeared. There were a great many contributing causes—this, that, and the other personality; this, that, and the other thing happened; a whole series of events—but the real reasons it failed were, first of all, a lack of loyalty to the engineering profession, and, second, that that was a competent position, an organization of organizations, and it is very difficult for a man to feel loyalty to an indirect organization. You must have individual membership. We must have individual membership in this organization which is to represent the entire profession.

The "Root" of Evils

Now a few words about fees and salaries. The Bible is the source of the statement, "The love of money is the root of all evil." As a corollary or paraphrase to that, I say, "The love of fees is the root of all professional evil."

We must not forget the source of the engineer's income has nothing to do with and does not in any way determine whether or not he is a professional man. He may work for the community, the state, the nation, a private manufacturing company, a utility, or he may be a consultant and work for himself. The source of his income and the source of his attitude has nothing to do with determining his profession. Wages, salaries, and fees are very important.

Most Engineers Wage Earners

Now, it is all right to work up a fine chart and fine table determining the fees that should be accepted by engineers for certain types of services, but actually today only a comparatively small fraction of the engineering profession work under the fee system. Most of us are much more concerned about salaries and wages than we are about fees.

And I have also observed that while many commercial concerns and some utilities have exploited the engineers of this country in the salaries and wages that they have paid them, nevertheless much of the exploitation of engineers has been done not by the public but by the older and more experienced members of our profession who ought to know better and ought to do better.

Must Stand for Justice

Now, we must stand for justice and fair play for all members of our profession, whether they are on a salary scale or whether they are on a fee basis. We must stand as a professional group for justice to them all. We also owe a responsibility for the furtherance of research. That is a professional obligation that we owe; first, that we may serve our clients or employers with the very latest and the best knowledge and skill; second, we should also do this for the sake of posterity, that we may add to the sum total of human knowledge, that we may improve on living standards, and that we may in the end have a better world in which to live.

It is a matter of pride to engineers of this country that an engineer, Professor Bush—I think perhaps he calls himself a scientist now, although he used to be Dean of Engineering at M.I.T.—directed and organized the research which produced the atomic bomb, and that an engineer, General Groves, directed construction, fabrication, and testing of this bomb.

I don't want to detract in any way from the glory which belongs to the scientists for making the fundamental discoveries connected with that, but nevertheless all of those discoveries were known before this war broke

Edward Larson

Edward Larson Resigns As Executive Secretary

After serving the National Society of Professional Engineers for nearly six years as its Executive Secretary, with headquarters in the Washington office, Edward Larson has tendered his resignation, effective as of December 31, 1945.

"Ed" has made firm friends among Professional Engineers wherever he has made his contacts from Coast to Coast. Those who know him best will agree that he has worked hard and earnestly for the upbuilding of the ideals, as well as the membership of the Society. During the past summer the condition of his health became such that he was compelled to ask for an extended leave of absence to enable him to get back into form. His place in the Society will be a difficult one to fill, especially in view of the greatly expanded program which was agreed upon at the Cleveland convention.

Because of his unswerving loyalty to the Society and all that the Society stands for, Professional Engineers everywhere will hope that Ed Larson may soon gain improved health, as well as opportunities for service in which to apply his exceptional and varied talents in the field of engineering.

out. They were well-established facts, but no one knew how to put those principles to a practical use. The engineers played a very, very important part in that, and I am sure that we all feel a great deal of pride in that. It emphasizes a fundamental difference that we have toward many other professions that we must not only know the laws and principles underlying our work, we must be able to do the thing, we must be able to apply them, and that differentiates us in a great way from a great many other professional groups.

Mere Membership Not Enough

It is our responsibility to advance the engineering profession in all of its many civic, technical, legal, and ethical aspects, and I believe that the best media through which that can be accomplished is membership in the Professional Engineering Societies. But membership is only static or indifferent support. One should take an active interest in the affairs of the Professional Societies. One should work on the committees—do you hear that, Steve Hale?—and one should serve as an officer and present papers before these meetings setting forth his ideas for betterment so that they may be reviewed, criticized and talked about and discussed by one's colleagues.

Responsibility to Youth

Another aspect of society which we owe a great responsibility to is the youth of our land. The progress made in any country and in any period in the history of civilization can be measured by the attention which adults give to the training of the youth of that period. Just as surely as the sun rises and sets, if we want a better engineering profession, we must train the youth who will eventually succeed us. There is no other way, gentlemen. We must train the youth of this land.

Now, we usually recognize that as far as our children are concerned. We usually want them to have a better education than we had, but we are usually not so enthusiastic about somebody else's children. We don't sometimes seem to care about the education of other people's children. Well, we should and we must care. There was a time in this country when the education of the youth of this land was thought to be a private matter. If a boy did not choose to go to school, nobody cared. That time, thank heavens, is past, long since past. Today all the states of the union have compulsory educational laws. We compel the youth of this nation to take and master, if they can, a certain minimum of formal education. That is necessary if civilization and our way of life is to survive.

Most states require children to remain in school somewhere from 16 to 18 years. It varies with different states and some, I think, have even had it lower. A few years ago Georgia had it down to 14. Now we have moved it up to 16. That is about the termination of high school, and bright, smart boys get through at 16 and average graduation is about 18. So that means that society today believes in this country that about the minimum education that a boy can have and function as a normal citizen is a high school education.

Training Based on Aptitude

Now, above the high school level education is competitive. It is not necessary that everybody be trained as an engineer. In fact, it is undesirable. It is not necessary that he be trained as a lawyer, doctor, preacher, teacher, and so on. Only those should be trained for those specific learned professions who are qualified by aptitude and particular talents and by a rather long period of study and training, and there are definite and specific rewards for each one of those and, therefore, there is competition.

I think that our group, the Professional Engineers, should take a great deal more interest in our school system than we normally do. Most of our Societies show some interest in our engineering colleges and some interest in the product of those colleges. Many times they want to employ these boys or many times they want to improve the standards of education in the different branches, different fields, but I should like to see those initials for the National Society of Professional Engineers, the NSPE, mean that we "never shirk public education" at whatever level, that we interest ourselves in it, regardless of whether it is the secondary school system, the college level, the university level, or the professional level.

More Engineers in High Places

I hope as the years go by that you will show more and more interest in this problem. We need more men of the engineering type on our school boards throughout the country. I once asked the Georgia Industrial Association how many members present were members of school boards. Let's show hands here. How many here in this group are members of school boards anywhere? Not a single, solitary one. Well, we ought to have a few. They had three. They had, of course, twice as large an audience as this. But that is the trouble all over the country, gentlemen. They were men of big affairs and they were running business and designing and fabricating important things. They were engaged in and had a large bloc of the industry of that region. You represent every state in the union.

These State Boards of Engineering Examiners, and all around, and the professional people ought to show more interest in the schools. If they don't, the level is going to continue to get lower and lower. I am sure that will pay magnificent dividends.

Great Duty to Public

Now, the thing that you wanted me no doubt to speak most about was the responsibility which our profession owes to the public. It is expected, of course, and accepted that we will as professional engineers give sound technical and professional advice to the public. We are paid to do that, and to do less is, of course, to neglect our duty, but my feeling is that as professional men we ought to do more.

We ought to participate in local government a great deal more than we do, and I don't mean just voting. I mean we ought to serve on the committees in the various civic organizations that are studying and investigat-

(*Continued on Page* 32)

Harry E. Nold, In Appreciation

The following resolution was voted unanimously by the Board of Directors meeting in Cleveland, on Dec. 7th:

"Your Committee feels that it can do nothing more appropriate as its final act before it is released than to express appreciation on behalf of this board to our retiring President, Harry Nold, for his years of splendid leadership and untiring devotion on behalf of this Society. We believe that the unquestioned progress which this Society has enjoyed during the past two years is largely due to his fine leadership. We hope that he finds his reward in the satisfaction of a job well done."

Report of the Joint Committee on the National Council of State Boards of Engineering Examiners

By J. F. Fairman, Chairman

This comprehensive report was addressed to the National Council of State Boards of Engineering Examiners, and to the National Society of Professional Engineers, and was read at the Society's Board of Directors' Meeting in Cleveland, on December 8th, by the Joint Committee's Chairman, J. F. Fairman.

Your Joint Committee appointed early this year submit this summary of their activities and certain suggestions and recommendations.

Method

Of necessity, the committee have carried on their work entirely by correspondence, using a method which might be characterized as "a series of successive approximations." This is mentioned because it worked surprisingly well and may be of interest to other groups. The chairman addressed a series of memoranda to the members, containing his views and the views of other members of the committee as received by him through correspondence, and suggesting a conclusion. With each memorandum, he included a return post-card on which "yes" or "no" answers could be made promptly for his further guidance. These were supplemented by correspondence with individual members, usually initiated by them, in amplification or clarification of their views on specific items. Thus it was possible for the chairman to draft this report with considerable assurance that it would meet with the approval of all the members of the Joint Committee. It did. It has their endorsement.

Scope

The assignment given your Joint Committee is delightfully indefinite and wisely so. A carefully defined scope frequently inhibits the activities of a joint body to the disadvantage of the organizations which sponsor it. The committee would not put in jeopardy their present freedom of action by making any formal recommendation on this matter but they do entertain the hope that the advantages of that "carte blanche" will be so recognized by their sponsors that neither of them will restrict it. This is not to infer that your committee will not welcome advice and suggestions. In addition, they need to be informed of problems which they should consider. They feel that they can serve most effectively by functioning as an exploratory and advisory rather than as an administrative agency, by studying problems common to the two organizations and reporting recommendations for separate or joint action as may be appropriate, and by promoting understanding and coordination of effort between the two organizations. That your committee have been pursuing this policy will be apparent, they hope, from the character and content of this report.

Agenda

Your Joint Committee received from the Presidents of the two organizations nine items for their agenda and added a tenth. These are:

1. Financial support of NCSBEE by NSPE and its member State Societies.
2. Legislative assistance in connection with registration laws.
3. Assistance by NSPE to the State Boards in securing increased appropriations of state funds in support of their work.
4. Investigation of violations and enforcement of registration laws.
5. Registration by endorsement.
6. Publicity or dissemination of information on engineering registration.
7. Engineers-in-Training.
8. Improvement in registration laws.
9. The development of a Code of Ethics and of Canons of Practice.
10. The holding of annual meetings of the two organizations at the same time and place.

These items pose problems of no mean proportions. Your committee have not attempted to solve them but rather to suggest approaches by which solutions might be found.

Because they are related, certain of the items have been treated in combination, namely, items 1 and 3 and items 2, 4 and 8. However, for convenience of reference, the numbers originally assigned have been retained.

Discussion and Recommendations

A. Items 1 and 3. The Financial Problems of NCSBEE and of the State Boards.

These problems are complicated by the natural diversity of the provisions of law and differences in administrative practices among the several states and by the questions which understandably remain to be resolved by NCSBEE itself as to its scope and functions. The latter are not matters appropriate

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Resolution of Appreciation To the Ohio Engineers

The following resolution was passed unanimously by the Board of Directors of the NSPE at the meeting of December 7th:

"RESOLVED, That the officers and Members of the Board of Directors of the National Society of Professional Engineers extend to the Ohio Society of Professional Engineers, through President John F. Hale, and particularly to the Cleveland Chapter, through President Bauer, General Chairman Freese and his committees, our sincere appreciation for the excellent arrangements and fine hospitality extended to us while here in Cleveland for the past few days. We wish them to know that this has been one of the most outstanding (and historical) annual meetings ever held by the National Society of Professional Engineers, largely due to the splendid work of the Engineers in Cleveland, for which we are deeply grateful."

for consideration by your Joint Committee. Moreover, the problems are not exclusively financial but involve the whole field of cooperation and mutual assistance between organizations having common interests and objectives. Accordingly, the following principles are submitted as a sound basis on which to proceed:

First, NCSBEE has a definite and an important place in the family of engineering associations in that it is organized to perform and is performing a function of inestimable value to the engineering profession and to the public;

Second, in view of the foregoing, NCSBEE is entitled to the assistance and cooperation of the engineering profession and of the public;

Third, NCSBEE itself can best determine its needs for assistance and the means by which the desired assistance can most effectively be rendered, based on the programs it adopts from time to time;

Fourth, NCSBEE may properly make its programs and its needs known to engineering organizations of professional caliber and national scope and enlist their assistance and cooperation;

Fifth, the foregoing are equally applicable to the State Boards in their relationship to engineering organizations operating principally in their respective states.

Method of Financing

More specifically as to the financial problem of NCSBEE, the ideal, long-range solution would seem to be found in an equitable apportionment of costs among the member State Boards themselves from funds derived from registration fees. But considerable time will elapse and much patient and persistent effort must be expended to reach that goal. In many states, special legislation must be passed to make state funds available for that purpose. In all equity, inasmuch as the source of these funds is the registration fees paid by members of the engineering profession, a sufficient portion of these funds should be made available to the State Boards to enable them adequately to do their work as well as to support their own national organization. The State Societies of NSPE and other state engineering associations should be willing to assist their respective State Boards in bringing this about but any efforts to this end in a given state should be carried on in cooperation with and under the guidance of the Registration Board of that state. Excessive or misdirected zeal frequently does more harm than good.

However acceptable this long range program may be, it does not solve the immediate problem. Evidently NCSBEE needs, or at least could use to advantage, a large income. If the five principles stated above are generally accepted, appropriate steps may be taken not only at the national level but in the several states. Certain national engineering societies are already making more or less systematic contributions in support of the work of NCSBEE. More of them might be persuaded to do likewise and some of the present contributors, with more complete understanding of the problem, might be glad to increase their appropriations. One member State Society of NSPE subscribes to the publications of NCSBEE for its officers, directors, and members of certain committees. Other State Societies might do so to their advantage. Another member State Society makes an outright contribution. Other State Societies might well follow this example.

Since all the members of your Joint Committee are members of NSPE, they can with propriety, and do, join in these

RECOMMENDATIONS

I. That NSPE continue and if possible increase its annual contribution to the work of NCSBEE; and

II. That NSPE inform its member State Societies of the problem and request them to consider how they can most effectively render their assistance and to volunteer it accordingly.

B. Items 2, 4 and 8. The Problems Associated with Registration Laws.

Legislative assistance in connection with registration laws, investigation of violations and enforcement of those laws, and improvements in them are parts of an activity in which both organizations have a major interest. Each organization has a standing committee covering the field: for NCSBEE, the Committee on Uniform Laws and Procedures; for NSPE, the Legislative Committee. Direct contact between these two committees would afford the most efficient channel for cooperation and coordination of effort between the two sponsor organizations. To facilitate working contact, the mechanism of a joint committee, consisting of the chairmen of the two committees and such additional personnel as may be helpful, should be useful. Accordingly, your Joint Committee submit these

RECOMMENDATIONS

III. That NCSBEE and NSPE, respectively, instruct the Committee to collaborate on their assignments, at least annually to report to the two organizations and from time to time jointly to make such recommendations for action by either or both organizations as in their judgment may be appropriate;

IV. That NCSBEE and NSPE join in the appointment of a special joint committee on Registration Laws and Procedures to facilitate and insure the carrying out of recommendation III;

V. That NCSBEE and NSPE recommend to their member State Boards and State Societies that similar arrangements be made by them for collaboration between and joint action by the respective Boards and Societies in the several states; and

VI. That reports of the activities of these joint agencies, both at the national and at the state levels, be given the widest possible publicity through the publications of the two organizations and other engineering societies as well as through the technical and public press.

C. Item 5. Registration by Endorsement.

Only one thing about this problem seems clear, namely, that registration by endorsement could come about automatically if the registration laws in the forty-eight states were uniform and were uniformly administered. Admittedly, that Utopian condition will be a long time coming and will be difficult not only to obtain but to maintain. Meanwhile, there is ample evidence that the State Boards are valiantly striving to administer the granting of licenses fairly and consistently, and are discussing their problems among themselves in a continuous

effort to work out practical solutions. Moreover, it appears to be one of those problems which had better be left in the hands of the Registration Boards with a minimum of advice and assistance from others, however well-intentioned the latter may be. Rather than pressing for an early solution or attempting to offer solutions to the problem, it is suggested that NSPE stand by in sympathetic understanding and be content to indicate its readiness to assist in any way it can, nationally or in the individual states, on the call and under the leadership of NCSBEE or its individual member Boards. Accordingly, your Joint Committee prefers not to make a specific recommendation on this item at this time but themselves to stand by and keep the problem under observation.

D. Item 6. Publicity or Dissemination of Information on Engineering Registration.

This is a field in which the engineering profession has been notably unsuccessful. One of the reasons may be that public relations is a professional or, if you prefer, an art in which engineers can not be expected to be qualified. If so, they would do well to obtain expert advice or assistance. Of course, that is expensive and they have not been able to afford it. Nevertheless, there appear to be some things that can be done by engineers as individuals and as organized groups. Your Joint Committee believes that a beginning should be made, however modest, and to that end offer the following

RECOMMENDATIONS

VII. (1) That a pamphlet explaining registration to engineering students be prepared and distributed under the joint auspices of NCSBEE and NSPE;

(2) That NCSBEE authorize their representatives on the Joint Committee to act as a special committee (a) to select the person to prepare the text and (b) to review, criticize, amend and finally to approve the text for publication;

(3) That NSPE authorize their representatives on the Joint Committee to underwrite the preparation, publication and distribution of the pamphlet using the funds of NSPE but with the understanding that no financial commitments will be made without the prior approval of NSPE; and

(4) That the pamphlet be distributed free of charge to senior students of engineering and be made available to others substantially at cost.

This recommendation is made on the assumption that the job has not already been done by some other agency in a reasonably satisfactory manner. Evidence on this point is strong but entirely negative. There is need for a brief but authoritative treatment of the subject in attractive pamphlet form. What better source of an authoritative statement is available than NCSBEE? What organization has a greater interest in promoting an adequate understanding of registration among students than NSPE? Here is a unique opportunity for those organizations jointly to render an important service to the future members of the engineering profession.

Experience has shown that the preparation of the text of a pamphlet of this kind is a one-man job, if it is to be done expeditiously. Moreover, the number of authorized critics should be limited if early publication is to be realized. Since the pamphlet will contain only factual material arranged in an interesting and informative manner, no process of elaborate review by the sponsoring organizations would seem either necessary or desirable.

While neither organization is free of financial problems, in the light of the discussions of items 1 and 3, it would seem appropriate for NSPE to underwrite this project as its contribution to the joint effort as well as in the interest of simplicity in handling the financial arrangements. The cost should not represent a major budget item, even for NSPE.

To round out a program which is believed to be possible of prompt execution, your Joint Committee presents these additional

RECOMMENDATIONS

VIII. That NCSBEE and NS-

ASME Officers at Annual Dinner and Honors Night

Guiding the activities of The American Society of Mechanical Engineers during the past and the coming year are the following, photographed at the 66th Annual Meeting dinner and honors night program at Hotel Astor, November 27: (Reading from left to right.)

President, 1944-45—Alex D. Bailey, vice president in charge of engineering, Commonwealth Edison Company, Chicago, Ill.

Secretary—Clarence E. Davies, Colonel, Ordnance Department, U. S. Army, Washington, D. C.

President, 1945-46—D. Robert Yarnall, co-founder and president of the Yarnall-Waring Company, manufacturers of power plant specialties, Philadelphia, director of the James G. Biddle Company of that city, and a member of the City Planning Commission. A descendant of one of the early Quaker families of Pennsylvania, Dr. Yarnall headed several relief missions abroad during both World Wars. He took office as head of the ASME at the close of this year's annual meeting.

PE recommend to their members, as an immediate activity and as a continuing program to supplement the use of the pamphlet when it is available, that they seek opportunities to address senior engineering students and to answer their questions regarding registration.

IX. That NSPE prepare, or recommend that the member State Societies prepare, a pamphlet similar to that issued by the Ohio Society entitled "The Professional Engineer in Industry" as well as companion pamphlets applicable to other fields of engineering.

X. That NCSBEE and NSPE call the attention of their members to the need for more wide-spread information as to registration and the professional movement among engineers and urge them, as individuals, to prepare timely articles for publication in the trade journals and the journals of the engineering societies.

As stated above, these recommendations are only a beginning but they are believed to be in the range of immediate possibilities. Your reaction to them will serve as a guide to your Joint Committee in their further consideration of this problem.

E. Item 7. Engineers-in-Training.

This item is in some respects a part of the problem of registration laws already discussed under items 2, 4 and 8. The fact that it has other than legislative aspects and because it is a new concept may account for the existence of committees in both organizations separate from those dealing with legislative matters. Many of the State Societies also have a committee on Engineers-in-Training. It is a subject worthy of separate and special consideration.

As in the case of problems associated with registration laws discussed in B above, direct contact between the groups dealing with the subject in the two organizations is believed to be desirable. Therefore, your Joint Committee urges the adoption of the following

RECOMMENDATIONS

XI. That NCSBEE and NSPE instruct their Committees on Engineers-in-Training to collaborate on their assignments, at least annually to report progress to the two organizations and from time to time jointly to make such recommendations for action by either or both organizations as in their judgment may be appropriate;

XII. That NCSBEE and NSPE join in the appointment of a special joint committee on Engineers-in-Training to facilitate and insure the carrying out of recommendation XI.

XIII. That NCSBEE and NSPE recommend to their member State Boards and State Societies that similar arrangements be made by them for collaboration between and joint action by the respective Boards and Societies in the several states; and

XIV. That reports of the activities of these joint agencies, both at the national and state levels, be given the widest possible publicity through the publications of the two organizations and other engineering societies as well as through the technical and public press.

F. Item 9. The Development of a Code of Ethics and of Canons of Practice.

This item would aptly be entitled "The development of a *uniform* code of ethics . . ." There are many codes and the argument seems to revolve around their length and phraseology rather than around the essential content. In some respects the situation is more difficult than that which obtains in the field of registration laws because it is easier to amend Codes of Ethics and any individual or organization can promulgate a new set. Your Joint Committee are reluctant to add to the confusion and while they are not prepared to submit any specific recommendation, they wish to record their feeling that it might be wise for NSPE to seek to collaborate with an existing agency which is making progress in this field, namely, the Committee on Principles of Engineering Ethics of Engineers' Council for Professional Development, on which NCSBEE is represented.

G. Item 10. The Holding of Annual Meetings of the two Organizations at the same time and place.

The idea is to enable the two organizations and their members to become better acquainted by observing each other in action and by the personal contacts which would be made, thereby promoting mutual understanding and cooperation on their common problems. Incidentally, meetings of any joint committees of the two organizations could be more conveniently arranged on that occasion.

Of course, there are disadvantages. If the meetings overlapped in time, much of the merit would disappear and if they were scheduled in sequence many individuals could not take the additional time required to attend both. Moreover, arrangements would have to be made a year or more in advance in order to enable compliance with the by-laws of the two organizations.

The purpose would largely be accomplished by scheduling a meeting of the Board of Directors of NSPE in conjunction with the annual meeting of NCSBEE, provided reasonably full attendance of board members could be obtained. Other combinations of more limited value are possible.

If the idea is deemed to have sufficient merit, it is suggested that the Executive Secretaries of the two organizations be instructed to explore the possibilities and make their recommendations as to holding a meeting of the two organizations at the same time and place during 1946 and 1947.

Future Work

The members of your Joint Com-

(*Continued on Page* 15)

Summary of Budget Report

The budget of the NSPE, for operating expenses during the year 1945 was set at a total of $38,850. Actually the necessary expenses exceeded the budget estimate on seven out of 16 major items of expense, the increases totalling $1,250. On other items the expenses were less than the budget estimate by a net $700. The actual amount of the 1945 budget has been revised to a new total of $39,400. The net actual expenses up to the end of November, 1945, were $39,542.08.

The 1946 budget covering the anticipated cost of the various routine activities for 1946 totals $47,000. To this total must be added an estimated $3,000, the probable cost of the President's Conference; $2,500 covering the items dealt with in the Policy Committee's report, plus a $500 for contingencies, making the total budget for the new year of $53,000.

Report of Policy Forming Committee

This Report Was Submitted to the December 6th Meeting of the 1945 Executive Committee in Cleveland. Approval and Adoption of the Policy Committee's Proposals was Recommended to the incoming Officers of the Society.

By J. S. Kennedy, Chairman

National Society of Professional Engineers Policy Report PREAMBLE: The recommendations contained in this report should not be considered an all-inclusive program for NSPE. They should be considered rather as an expansion of and intensification of our overall program to be pursued as diligently and as rapidly as income will permit.

The Report recommends the following major activities, as shown herewith:

1 LEGISLATION—We are of the opinion that this activity cannot be carried out satisfactorily on a voluntary basis and that it is very desirable to contemplate the employment of a Legislative Secretary to carry on an effective legislative policy.

Legislative Policy Needed

We recommend that the Legislative Committee be charged with the responsibility of developing a general legislative policy and be given power to act on legislative matters. The Legislative Secretary, with necessary assistants, will carry out in large measure the legislative activities, and the Legislative Secretary will act as Secretary of the Legislative Committee. It is estimated that such a program will require a minimum annual expenditure of $15,000.00.

2 MEMBERSHIP — We believe that satisfactory membership promotion cannot be handled entirely on a voluntary basis. It is the function of NSPE to assist in promoting new State Societies and advise and cooperate with existing Member State Societies on organization and membership matters, seeking to retain and increase present membership. As soon as funds permit, we recommend that a Membership Secretary, who shall act as Secretary of the Membership Committee, be employed with sufficient staff to effectuate a membership program. We estimate the cost of this to be $13,500.00.

J. S. Kennedy

Full Time Editor Suggested

3 PUBLICATION — We recommend that as soon as possible a full time Editor for the *American Engineer* be retained, to be located in Washington, D. C. This Editor should serve as Secretary to the Publications Committee and be in charge of National publicity matters. To carry out such a plan will require adjustment of the existing contract with the publisher of the *American Engineer*. It is estimated that the expense herewith will be $12,500.00.

4 PRACTICE AND ETHICS—We recommend that we strive for the adoption of a uniform Code of Ethics, and that we urge the Member State Societies to vigorously pursue the adoption of fee and salary schedules. Committee expense $500.00.

5. NATIONAL COUNCIL OF STATE BOARD OF ENGINEERING EXAMINERS—We recommend a continuation of the Joint Committee with the NCSBEE; that we continue to cooperate with NCSBEE and continue the annual contribution of $300.00. We recommend that we sponsor jointly with NCSBEE and underwrite the cost of a pamphlet to explain registration to engineering students. The actual cost of this will be subject to approval later, and it is not believed that this can be accomplished before 1947. We recommend that serious consideration be given to the recommendations contained in the report to be submitted by Engineer James F. Fairman concerning the Joint Committee work with NCSBEE. Committee expense $500.00.

Cooperation Among Societies

6 — RELATIONSHIP WITH OTHER ENGINEERING SOCIE-

Fairman—JCNCSBEE Report

(*Continued from Page* 14)

mittee believe they have made substantial progress on their initial assignments but they recognize their job is not done. It will be noted that they have deliberately refrained from recommending that they be relieved of further responsibility for any item, even in those instances where specific recommendations were made that some other committee or agencies be charged with primary responsibility for carrying on the work. They believe they should follow up on all items assigned to them, not in any administrative sense but to be in a position to make further suggestions or recommendations if that seems necessary or desirable. Unless otherwise instructed, they will proceed accordingly.

The members of the Joint Committee, all of whom join in the presentation of this report, are

For NCSBEE	For NPSE
C. S. Crouse, Chairman	J. F. Fairman, Chairman
R. J. Briggs	L. S. Finch
W. W. Graf	E. A. Holbrook
I. D. Guillemette	C. G. Krueger
A. F. Mitchell	H. E. McWethy

On their behalf, it is

Respectfully submitted by

J. F. Fairman,

Chairman, Joint Committee

October 24, 1945 NCSBEE-NPSE

TIES—We recommend that since NSPE is desirous of cooperating to the fullest extent with other engineering societies on problems of mutual interest within the scope of the aims and objectives of the NSPE that the Executive Director be responsible for this important activity.

7—COLLECTIVE BARGAINING—It is recommended that the Fact Finding Committee on Collective Bargaining be continued. The NSPE has previously recommended that each Member State Society set up an Employment Practice Committee whose members shall acquaint themselves with the rights and privileges of engineers under the NLRA so that they may be available and able to give intelligent advice and assistance to engineers who are faced with the problems of unionization and collective bargaining.

Recommends Report of Electrical Engineers

The American Institute of Electrical Engineers has, after study, developed a timely report on the above subject. We recommend that this report be endorsed by NSPE and permission be requested to publish, with proper acknowledgment, the entire report in the *American Engineer*... We recommend further that favorable consideration be given to the recommendations contained in the Report of the Committee on Fact Finding on Collective Bargaining, which report will be submitted later. Committee expense $500.00.

8 — PUBLIC RELATIONS — We recommend that, temporarily, public relations, which includes relations with other professions, be handled on a voluntary basis, but obviously must be the responsibility of the Executive Director working under the policies established by the Public Relations Committee. Committee expense $500.

9—LEGAL—We recommend that we should look forward to the employment of a legal counsel, located in Washington, D. C., who is qualified to advise on legislative matters and legal questions coming before the Society. It is estimated that this will cost $2,500 annually. For the coming year, however, we recommend that we continue the present existing arrangement for legal counsel.

Exchange of Information Needed

10 — ENGINEERS-IN-TRAINING—We recommend that the Education Committee, operating on a voluntary basis, should cooperate with other agencies and with Member State Societies to exchange information and encourage development of an Engineer-in-Training Program. We believe that a concerted effort should be started to include in the program of engineering colleges a series of lectures in ethical and professional matters to acquaint the student engineer with a professional outlook. Committee expense $500.

11 — RELATIONSHIP WITH MEMBER STATE SOCIETIES—We recommend that beginning in 1946 an annual conference of Member State Society Presidents be held, at which the NSPE program will be presented and discussed. We recommend that provisions be made to reimburse the Presidents for their necessary traveling expense in attending such a conference. The estimated cost of this is $3,000. We also recommend that as soon as funds permit a similar annual conference of Member State Society Secretaries be inaugurated.

Executive Director Needed

12—ADMINISTRATION — We recommend that to effectuate the above program an Executive Director be employed, and that until such time as a Legislative Director can be employed said Executive Director shall devote the portion of his time necessary to following legislative matters. Estimated administrative budget $35,000.

We recommend further that as soon as possible an Annual Roster be published. Estimated cost $5,000.

We recognize the urgent need for a study of the Federal Civil Service Regulations as they affect the engineer and recommend that this problem be attacked as soon as it is physically possible to do so.

We recommend further that this report, if approved, be referred to our legal counsel for recommendations relative to any changes in Constitution or By-Laws which might be necessary to effectuate the same.

Good Things Cost Money

To carry out the above recommended program of National activities the following estimated expenses will be entailed:

Legislation	$15,000
Membership	13,500
Publication	12,500
American Engineer	12,000
Practice and Ethics	500
NCSBEE	800
Collective Bargaining	500
Public Relations	500
Legal	2,500
Engineers-in-Training	500
State Presidents' Conference	3,000
Administration	35,000
Roster	5,000
Contingent	5,000
Total	$106,300

Executive Committee Sends Telegram On Atomic Energy

To Hon. Brien McMahon, Chairman, Senate Atomic Energy Committee, U. S. Senate, Washington, D. C.:—"Until now only the destructive potentialities of atomic energy have been publicly demonstrated; but we are positive it will eventually bring about the highest standard of living and the greatest industrial development ever known.

"Nevertheless Pearl Harbor Day should remind us that no matter how hard we try to work for the best in human being's we *must* be prepared for the worst.

"Certainly for mankind to realize the greatest benefit from atomic energy, its destructive use must be prevented, and to this end we recommend:

A Recommendation

"(1) Preparedness and continued research to preserve our worldwide power and influence at the high level which has just been attained;

"(2) Our influence and leadership should be used to foster international cooperation; United States prestige achieved through great sacrifice should not be dissipated by default;

"(3) Destructive use of the invention should be designated an international crime; it must be prevented; an international organization should be charged with this duty."

Ritchie Lawrie, Jr., newly elected president of the NSPE, read the foregoing telegram in the 11 P. M. news broadcast over Station WGAR Cleveland, December 8th. Commenting on the message, Mr. Lawrie said: "The anticipated high standard of living and industrial development will result chiefly from the creation of new wealth and new industry. We are thinking in terms of a 50-year period during which the relatively small proportion of present equipment and industry which will be made obsolete by the new inventions can be written off without financial panic and losses over and above those from normal business hazards."

Report of Legislative Committee For Year 1945

By Ray M. Fuller, Chairman

This report was read before the Board of Directors meeting at Cleveland, on December 7th. It was unanimously approved with many expressions of appreciation of the amount of time and thought that had been put into its preparation.

Let us start with a quotation, by the completion of which we will close this report:

"There is a tide in the affairs of men
Which taken at the flood, leads on to fortune."

At the expense of a good deal of time and thought we have come to the following conclusions:

The Chairman's Conclusions

(a) That a Society of nearly 11,000 members, representing as it does some 15% of its potential membership, organized for the main purpose of promoting the interests of the Professional Engineer in legislative and economic matters, has reached the point where it should start to assert itself or let some one else do the job. There are cruder ways of expressing it.

(b) That if NSPE is going to do this asserting, for which purpose we receive dues from our membership, without waiting for the increase of dues voted for January 1947, now, without delay, is the time to take positive action along that assertive line. Congress is in session now—not in 1947. There are many bills under consideration now before Congress that affect your living and mine, both for the present and for the future—it is immediate action that is required if we are to justify the existence of our Society.

(c) That one of the weaknesses of any organization such as ours is its inherent inertia due to its size and sectional character. If this is to be overcome some means must be found of establishing broad lines of legislative policy, and the delegating to a comparative few the implementing and effecting of such policy as the occasion arises. Time frequently does not permit of lengthy discussion, nor distance of the frequent meeting of even the Legislative Committee itself.

(d) That if positive action is shown, and its necessity at this time is properly presented to our membership, they will be unwilling for us to further defer such positive action.

Recommendations

Using these conclusions as a base, the following definite recommendations are made:

(1) That the budget for ensuing year be increased by a definite minimum sum of not less than $15,000 at the start, for use by the Legislative Committee; to be added to in a proportionate amount as the income or membership increases, for the purpose of carrying out its duties as stated in the Constitution and By-laws of the Society. This money to be spent as directed by the Executive Committee of the Society.

(2) That the Executive or other authorized committee be instructed to start immediately to canvass the field, seek out, and if possible employ a permanent, salaried, Legislative Director (or Secretary); if possible arranging to secure his services prior to 1947, and to discuss with him the kind of an organization that should be planned, and if necessary adding step by step to this organization for this specific purpose as the financial means permit. Pending the advent of this Legislative staff, that the Executive Secretary of the Society be directed to devote a larger portion of his time to legislative and kindred matters.

Set Legislative Policy

(3) The Legislative and Executive Committees be instructed to prepare prior to the next regular meeting of the Executive Board, a broad policy on legislation before Congress, to the end that the Legislative Committee through its Chairman or other authorized representative, can act as representative before Congressional Committees, governmental agencies, etc. and otherwise represent the membership of the National Society without the delay now encountered when timely action is needed.

(4) That the critical situation in legislative matters be concisely, frankly and bluntly put to our membership, and that they be solicited at this time to voluntarily increase their national dues, by one-half of the increase over present dues voted for 1947, in order that they may be adequately represented in matters vitally concerning them and the profession this coming year.

(5) That the Legislative Committee through its National Headquarters be authorized to issue a weekly bulletin to all State Societies and their local Chapters, while Congress is in session, keeping them informed of the current status of national Legislation. This is to be a mimeographed—inexpensive sheet.

Get Data on Membership

(6) That the National Society through its headquarters staff immediately start to canvass the membership to secure data as to their professional and educational background, as one means of obtaining information for use of the Legislative Committee in its work. At times it is essential that such information be available for proper representation. It is our belief that this information can be obtained for a considerably less cost than we have heard mentioned in this connection.

(7) That the recommendation of the "Model Law Conference" be acted on at this meeting and adopted.

(8) That hereafter, when the Board of Directors passes Resolutions for the drafting of legislation to be presented to Congress seeking its enactment, or matters of like import, they at the same time appropriate the funds for the purpose of the Resolution. Otherwise a lot of wasted time ensues. You don't get something for nothing in this world very often.

We might sum up these recommendations with one further "Conclusion"—the time for an *effective voluntary legislative committee,* without the assistance of a Washington staff, has passed.

Following, we illustrate the basis

of our conclusions and recommendations:

Bills in Congress

In the files of Chairman's office, sent to him from Washington, are some fifteen to twenty bills that should have before this time received the attention of a Legislative Director and his organization who could spend all of their time reading them carefully; analyzing them and digesting their contents for possible effect on the profession and in particular the registered part of it; following them through to the Committees where they originated or were referred, and making our position clear; and if necessary on into the Halls of Congress, at the same time marshalling the weight of the State Societies to the end that our profession is not discriminated against, and after that into the Bureaus or Agencies who will administer them after they become laws.

All of these bills to which I refer do, or can, affect the status and livelihood of the Professional Engineer.

As a makeshift expedient and experiment copies of a number of these bills were sent to all of the members of the Legislative Committee for their information and comment. Two each of the committee were asked to read one each of these bills and send their comment to the Chairman for his guidance, and to relieve him of the responsibility for acting alone.

At the date this is written only four replies have been received. Even this is encouraging.

Public Law No. 359—The Veterans' Preference Act of 1944

Early in August we received a letter from President Nold in which he asked that we consider and take such action as necessary in the matter of sending to the Civil Service Commission the requirements as to standards of education, etc., that should be required for positions where professional status was involved. There seemed to be a lowering of these standards in the Veterans' Preference Act of 1944, or in its administration. Our cooperation had been asked by the American Welding Society.

One excerpt from this law says, "No minimum educational requirements will be prescribed in any civil-service examination except for such scientific, technical, or professional positions the duties of which the Civil Service Commission decides cannot be performed by a person who does not have such education. The Commission shall make a part of its public records its reasons for such decision."

It is not our intention to go into a discussion of this law, or any part of it at this time. Again it is the explanation and reason for a great deal that has since developed.

Training of Scientists

An accompanying letter, signed by the President of the National Academy of Sciences, and by the Chairman of the National Research Council, had in it a couple of paragraphs that seemed to us particularly pertinent, and significant. It said, "It is therefore possible that the Civil Service Commission might welcome competent testimony as to the requirements necessary for the training of all of the various types of scientists whom the Government has occasion to employ.

It would seem desirable, on this account, for the governing body of your Society to inform officially the Civil Service Commission as to the preparation which is deemed necessary for entrance into your profession. What percentage of the members of your professional have come up without college training? What percentage have only Bachelor's degrees? Masters degrees? The public welfare would suffer if it were generally believed that scientific men were inferior to those in private institutions," and then more along this line . . . Then it ends, "the more specific and factual, rather than the emotional, your letter can be, the more useful it will be to the Civil Service Commission."

What do we have along this line regarding our own members in Washington? Nothing. What do the Founder Societies have regarding their members along this same line of information? So far as we could ascertain—nothing. How do you make a factual approach without the necessary data?—I don't know.

We did write to our legislative committee members for such data as the State Societies might have, and received three replies (which were appreciated) and not too much specific information.

We regret that the subject of our instructions is still without direct progress.

Now we come to the point of this dissertation. It was beginning to be driven home to us by this time that NSPE, alone, handicapped for the time being by lack of funds and understaffed and overworked in Washington, could not put up much of a front in approaching the Washington Agencies, let alone impressing Congress on pertinent legislation.

Sequel—N. Y. Visit

We decided, with the permission of President Nold, to approach the Founder Societies to see if they might be interested in a pooling of our resources in order to gain strength and a united front for the profession in national legislative work, at this critical time.

The Chairman of your Legislative Committee made such an approach in a trip to their New York headquarters, was cordially received, and by chance invited to sit in and listen and observe the operation of what he had gone to New York to seek out; a meeting of a Panel Committee of the Engineers Joint Council composed of representatives of the four Founder Societies and the American Institute of Chemical Engineers, discussing the stand to be taken on the Kilgore and Magnuson Bills on Scientific Research. We found our personal views coincided with theirs in most respects and informed the Executive Committee of NSPE accordingly.

Again we are not going into the details of these two bills, of which there has been a great deal in the papers.

And for your further information we at this point insert the opening paragraph of the "Panel Committee Statement—presented to the Congressional Committee holding hearings on these bills." It says,

"This statement is submitted on behalf of a special panel of appointees from the five major National Engineering Societies, viz:

"The American Society of Civil Engineers.

"The American Institute of Mining and Metallurgical Engineers.

"The American Society of Mechanical Engineers.

"The American Institute of Electrical Engineers.

"The American Institute of Chemical Engineers."

"The panel was appointed by action of the Engineers Joint Council, a body composed of the head executives of

the aforementioned Societies, the aggregate membership of which approaches seventy-five thousand qualified American Engineers. The Engineers Joint Council, at whose behest the panel presents its views, constitutes thus the crowning body of the organized American Engineering Profession."

As a by-product of this venture of ours, we discovered another weakness that is due to lack of aggressive leadership, and there is no personal criticism involved in the lack of it—such criticism belongs to all of us.

From the Director of Hearings on the Kilgore-Magnuson bills, we learned that due to an apparent confusion of strikingly similar names, the Secretary of another Society, so the Director thought, was offering to appear and speak for NSPE. We hope we got that straightened out.

Does the picture start to stand out in relief?

McCarran "Federal Aid Airport Act"

About the first of October we received a communication from a member, with a copy of a letter that had been written to his Congressman, regarding the McCarran "Federal Aid Airport Act" which had just been passed by the Senate and was soon to come up for consideration in the House.

This communication took exception to the McCarran bill on the grounds that the Administrator is charged, not only with the administration of the Act, but also "including the job of preparing plans and specifications for airports to be constructed."

In the House there was at the same time a similar companion bill—H.R. 3615. The House of Representatives in the end adopted the MsCarran Bill —S2, soon to become a public law.

A careful reading of the Act does not show that the bill itself makes it mandatory for the Administrator to do more than set up standards for work, and to approve plans where public money is being spent. Unfortunately, unless otherwise directed, the tendency of most of these bureaus is to take over work of this nature which the act in itself perhaps did not intend. In this particular case we already know that such has been done, and have already seen evidence to justify the fears of the member, the copy of whose letter we were sent.

"Engineers" Not Specified

For our purposes the Act should have provided that such work be performed by Registered Engineers, or at least "practicing engineers" in conformity with the standards set up by CAA.

Upon receipt of this communication we immediately sent copies of S-2 and H.R. 3615 to all Legislative Committee Chairmen of the State Societies (our own legislative committee) together with a copy of the letter our correspondent sent to his Congressman. This letter had been well written. We also sent to them a list of the House—Interstate and Foreign Commerce Committee members before whom the bill was to be heard, with a suggestion they write their representatives about the matter.

Our point in citing this particular happening is to further illustrate one of our present weaknesses. Legislation, if it is to be influenced to preserve our profession, should start in the committee before it is reported out, and not after a bill is passed. And once passed we must be eternally vigilant to see that our interests are not trespassed upon. The first can only be done by an alert organization, functioning on the ground in Washington who can devote their whole time to the job. The second will require the close cooperation of Washington and the State Societies.

Rivers and Harbors Bills

Occasionally a ray of sunshine filters through our otherwise gloomy outlook.

Recently our Executive Secretary forwarded to us correspondence, about bills to become the subject of Congressional Committee Hearing on Rivers and Harbors, in which the aid of NSPE was solicited.

It seemed like a good bill, in the interest of all Americans; and, "wonder of wonders," we found in it a paragraph part of which stated, "and the preparation (either by its engineering staff or by *practicing engineers* employed for that purpose) of engineering reports, plans, specifications in connection therewith."

We have seen Bills that mention the architects—they have a representative in Washington—but this is the first we have seen that mentions *the "practicing engineer."*

We didn't know whom to thank, so we have extended our appreciation to the sponsors of the bills—Senator Barkley and Representative Spence.

Legislative Committee Comment and Weekly Bulletin

On the credit side of the ledger, we hope, has been the inauguration of the "Legislative Committee Comment" started with the September issue of *The American Engineer.*

The conception of this idea was twofold, first to help *The American Engineer* be of more practical value to our membership, and secondly, as a means of making our membership more conscious of legislation affecting their daily lives.

This again has been on a voluntary basis, which cannot long be continued and properly belongs to the Washington office and a trained journalist if it is desired to be continued. We believe that like material on Ethics and Practice, etc., from over the states would be of interest and liven up the magazine.

Aid to State Legislatures

In similar connection, during sessions of Congress we should have a more rapid and effective means of keeping the various State Legislative Committees and State Society Chapters constantly informed of what is happening, and being talked about, and proposed to happen in Congress.

For this purpose we propose, and recommend a weekly—current and up to the minute—Legislative Bulletin to be sent to all State Legislative Committees and State Society Chapter Secretaries. This need not necessarily be elaborate, and should be short and concise. It can be mimeographed at the start on standard sheets with previously printed "masthead," and inexpensively mailed. It is one way we can get quick action when more than local judgment and help is needed by the Washington headquarters and staff. In time it will give a method by which the views of our constituents can be ascertained in time to form general policy and influence legislation.

We do not believe enough of these simple and rather inexpensive methods have been tried out by the Washington Headquarters, as yet.

Model Law Conference

Copies of the procedings of the Conference on the "Model Law" for the Registration of Professional Engineers and Land Surveyors, sponsored

by and held in the Board Room of the American Society of Civil Engineers on August 28th, have been sent to the members of the Executive Board for their consideration, as well as to the members of the Legislative Committee who were requested to send their personal views on to the Chairman prior to this meeting. The receipt of the "proceedings" of the Conference was not in time to ask for official action of the respective State Societies, even if that had been desirable.

NSPE was represented at this Conference by four members appointed by President Nold. Of the representatives of the engineering societies in attendance—50 per cent at least were members of NSPE. It could hardly be said that we were not properly represented.

In regard to the suggested changes we can only say, the men who took time to come to this conference from all over the United States were sincere in their desire to get a meeting of the minds. There was free discussion, and no particular viewpoint prevailed in all things. While the results achieved may not be perfect, depending on the particular viewpoint, they are probably as good as can be obtained by any such large group discussing subjects of such controversial nature.

Comment on "Model Law"

We received a few letters of comment from the members of the Legislative Committee regarding the proposed changes, but to save time and space we will only quote from one at this time, because Mr. LeClair, Chairman of the Legislative Committee of the Illinois Society of Engineers, and one of our Legislative Committee Members was also present at this conference as one of the representatives from the American Institute of Electrical Engineers.

His letter says, "The proposed changes in the 'Model Law' as you know from the discussion at the meeting, were not unanimously agreed to by all present. Nevertheless, the draft which you sent out was the result of a free and open discussion in which all major engineering societies were invited to take part. It seems to me that such meetings are the place where disagreements are to be aired and compromises agreed to."

We received much the same approval from the Missouri and Ohio Legislative Committee Chairmen. Others we have not heard from as this is written.

If we are to attain any unity of the engineering profession, it seems essential that we present a united front. I, therefore, recommend that the Committee go on record as recommending an endorsement of these changes by the National Society of Professional Engineers.

In passing, might we say that we canvassed the members of the Legislative Committee for their views on the changes that were originally proposed when the call for the Conference was sent out, and that prior to the Conference we sent a copy of all of this comment to the NSPE members who were to represent us.

Forty-seven of the forty-eight states now have registration laws. Three of them have new laws that have been enacted in the past year, and a few of them have amended their present laws this year.

Our own recommendation would favor adopting the changes suggested by the Model Law Conference, and then see how some of these new laws work out in actual practice. There is a divergence in these new laws that is quite pronounced in some respects. It seems foolish to rush into changing the other laws until experience has been gained under the new ones. There are bound to be some points of weakness in all of the new laws.

Resolution of July 21st

The Resolution of July 21st was for the introduction of legislation to obtain "Maximum compensation for the services of consulting engineers in connection with the design and construction of Federally sponsored projects."

By letter of October 26th, we were notified to take official cognizance of this Resolution, passed at the July 21st Executive Board meeting. We immediately wrote to the Society's legal counsel to find out what was necessary to accomplish this assignment, and are working on the matter at this time.

Because it bears on one of our recommendations, attention is called to the fact—you don't just pass resolutions to get bills introduced and passed by Congress. It is not that easy, and unless the resolution when adopted carries with it an appropriation sufficient for the purpose, it is largely a matter of wasted time.

Part of our present endeavor in connection with the July 21st resolution is to get some idea of what such cost would be. At this time we are, however, unable to report on this phase of the matter. A permanent legislative staff would be of great value along these lines; and in the end, the successful passage of such legislation must be obtained by combined activities of both National and State Societies, backed by competent legal advice.

Labor, Wage and Hour Laws, Etc.

It has been our understanding that labor laws, wage and hour laws, and similar legislation were in the hands of special committees of NSPE though we have been skirting around the fringes in these matters some of the time when they have been referred to us.

We assume these special committees will present their own reports.

However, we cannot refrain from stating that unless we want to become "flotsam in the maelstrom of the present struggle"—and we are pretty much that now—we must immediately adopt some definite policy in these matters and gird ourselves with the "sinews of war" in the shape of organization and funds for the purpose.

It is our belief that all of these special committee matters affected by legislation should tie into the legislative program as a whole. In the end for co-ordinated and effective action they will have to be channeled back to the Legislative Director for that purpose.

Conclusion

In concluding this report, and we have only given you a cross section of available material to write about, we have before us the very fine report of Mr. Herman F. Lane, Chairman of the Legislative Committee of 1944. What we have said in our report only reiterates to a considerable extent what was said in his report of August 21, 1944. Except for a somewhat different approach based on further investigation of our problem, and the events that are brought about by the passage of time, our conclusions and recommendations are fundamentally the same, with this difference—an irreplaceable year has been lost.

May we now finish the quotation with which we started?

"There is a tide in the affairs of men

(*Continued on Page* 32)

MEMBER STATE SOCIETIES N.S.P.E. — *Officers and Directors*

Member	President	Secretary	National Director
ARKANSAS	DAN D. RICKETTS 219 Terminal Warehouse Little Rock, Arkansas	R. M. NEWSOM Arkansas Highway Dept. Little Rock, Arkansas	FRED J. HERRING Arkansas Highway Department Little Rock, Arkansas
CONNECTICUT	LEWIS C. SMITH North Haven, Conn.	ROBERT A. CASTRO 183 Brewery Street New Haven, Conn.	JOHN W. SHALLENBERGER 886 Main St. Bridgeport, Conn.
D. C.	FREDERICK W. HILL 6440 Barnaby St., N.W. Washington, D. C.	MAJ. ELMER C. KAUTT 1033 Patrick Henry Dr. Arlington, Va.	HERMAN F. LAME Westchester Apts. Washington, D. C.
GEORGIA	STEPHEN C. HALE 170 Boulevard, S. E. Atlanta, Georgia	RAY L. SWEIGERT Georgia School of Technology Atlanta, Georgia	ROY S. KING Georgia School of Technology Atlanta, Georgia
ILLINOIS	GEO. H. ANDERSON Annex Building Herrin, Ill.	H. E. BABBITT 204 Engineering Hall Urbana, Ill.	J. M. WHELAN 1322 Plainfield Joliet, Ill.
INDIANA	M. W. CAMERON 3632 Guilford Ave. Indianapolis, Indiana	L. M. CONDREY, Ex. Sec. 3436 North Temple Avenue Indianapolis, Indiana	BEN H. PETTY 707 Crestview Place West Lafayette, Ind.
KANSAS	D. F. JOSLIN S.B.A. Hill R.R. No. 8 Topeka, Kansas	HAROLD H. MUNGER Kansas State College Box E Manhattan, Kansas	C. H. SCHOLER Kansas State College Manhattan, Kansas
MARYLAND	CHARLES A. MOHR 1716 Windemere Ave. Baltimore, Md.	ROBERT ANDREW NORRIS Springfield State Hospital Sykesville, Md.	RUSSELL B. ALLEN 4610 Hartwick Rd. College Park, Md.
MASSACHUSETTS	WILLIAM F. RYAN Stone & Webster Co. 49 Federal Street, Boston, Mass.	ALVIN S. MANCIB P.O. Box 53 West Somerville, Mass.	RAYMOND C. NEWTON Babson Park 57 Massachusetts
MINNESOTA	N. T. RYKKEN 5349 Beard Ave. So. Minneapolis 10, Minn.	RICHARD R. PRICE, Ex. Sec. 1010 Guardian Building Saint Paul 1, Minnesota	S. L. STOLTE 1437 Marshall Avenue Saint Paul 4, Minnesota
MISSOURI	BRUCE WILLIAMS P. O. Box 264 Joplin, Missouri	H. J. BRUEGGING P. O. Box 365 Jefferson City, Mo.	C. P. OWENS State Highway Dept. Jefferson City, Mo.
NEW JERSEY	STEPHEN G. SZABO General Motors Corp. Detroit 2, Michigan	FREDERICK D. BRAUN 16 North Hillside Ave. Ventnor City, N. J.	HUGH C. CLARKE 97 Bentley Ave. Jersey City, N. J.	C. GEORGE KRUEGER 85 Van Reypen St. Jersey City, N. J. JOS. M. CERRETA 163 W. Colfax Ave. Roselle Park, N. J.
NEW YORK	JOS. A. BRADY 39 Osborne St. White Plains, N. Y.	ERNEST F. FOX 1941 Grand Cent. Term. New York, N. Y.	WM. H. LARKIN c/o B. F. Sturtevant Co. 420 Lexington Ave., N. Y.	LELAND R. POST % N. Y. Tel. Co. Binghamton, N. Y.
OHIO	JOHN F. HALE 500 Municipal Bldg. Dayton, Ohio	LLOYD A. CHACEY, Ex. Sec. 63 South High Street Columbus, Ohio	J. S. KENNEDY 2945 Lee Road Shaker Heights, Ohio
OKLAHOMA	CLARENCE A. STOLDT 410 Commerce Exchange Bldg. Oklahoma City, Oklahoma	M. R. CUNNINGHAM 410 Commerce Exchange Bldg. Okla. City, Okla.	CHARLES S. LARKEY Box 521 Tulsa 2, Oklahoma
PENNSYLVANIA	SAMUEL BAKER 1616 Jefferson Avenue Scranton 9, Pa.	RUSSELL S. CONRAD 29 S. 3rd St. Harrisburg, Pa.	J. J. PAINE 1430 N. Euclid Ave. Pittsburgh 6, Pa.	SAMUEL BAKER 1616 Jefferson Ave Scranton 9, Pa
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VIRGINIA	C. GRADY CATES 417 Arlington Rd. Roanoke, Va.	C. G. MASSIE 4030 Fort Drive Lynchburg, Va.	J. FRANCIS SETTE 4701 Connecticut Ave., N. W Washington, D. C.	
WASHINGTON	WALTER L. RICHARDSON 1430 — 11th Avenue W Seattle, Washington	MERLIN E. CUSTER 1331 3rd Ave. Bldg. Seattle, Wash.	JOSEPH E. WICKSTROM 761 Empire Building Seattle, Wash.	
WEST VIRGINIA	CHARLES E. SNYDER 721 Mt. Vernon Avenue Fairmont, W. Va.	ROSS B. JOHNSTON, Ex. Sec. Kanawha Hotel Charleston, W. Va.	T. J. JACKSON 1203 Augusta St. Bluefield, West Virginia	
WISCONSIN	WILLIAM J. URBAN 3001 West Canal St. Milwaukee 8, Wis.	O. J. MUEGGE 656 Crandall St. Madison 5, Wisconsin	L. E. PETERSON 312 E. Wisconsin Ave. Milwaukee, Wisconsin	

Kindly report any errors or omissions to the Editor.

National and State Society News

Coming National and State Society Events—

We are endeavoring to make this column an informative calendar of National and State meetings. We invite the thoughtful cooperation of all committee members to help us keep this information complete and up-to-date. We are not including city or County Chapter events, as it is thought these generally have chiefly a local interest.

Jan. 25-26, Illinois Engineering Society, Annual Meeting, Rockford.

Jan. 28, District of Columbia Society Meeting, Washington, D. C.

Feb. 9, Executive Committee of the NSPE, Washington, D. C.

Feb. 14-15, Ohio Society of Professional Engineers Convention, Akron.

Feb. 20, Minnesota State Council Meeting, St. Paul.

Feb. 21, Minnesota Annual Assembly Meeting, St. Paul.

Feb. 21, 23, Minnesota State Federation of Engineering Societies, St. Paul.

Mar. 15, 16, New Jersey State Annual Convention, Newark.

Mar. 29, 30, NSPE Board of Directors' Meeting and Conference of Presidents of State Societies, Columbus, Ohio.

Oct. 27, NSPE Board of Directors Meeting, St. Louis.

Oct. 28, 29, Meeting of the NCSBEE, St. Louis.

Dec. 6, 7, NSPE Annual Convention and Third Annual Meeting of the Board of Directors, Atlanta, Ga.

ILLINOIS

The program for the 61st annual meeting of the Illinois Society of Engineers is practically ready. The meeting will be held January 25 and 26, 1946, in Rockford, Illinois. Mr. J. H. Van Deventer, Editorial Director of Iron Age, will be the principal speaker at the banquet, his talk will be "Let's Take Off the Brakes." At the All Section Luncheon Prof. T. C. Shedd of the University of Illinois and chairman of the examining committee will speak on the Illinois Professional Engineering Act.

INDIANA

The annual meeting of the Indiana Engineering Council and the Indiana Society of Professional Engineers, was held at the Claypool Hotel, Indianapolis, on Friday and Saturday, November 30 and December 1st. The outline of the program indicates that Indiana Engineers are really *on the march*.

MISSOURI

Captain Walter A. Hamilton, USNR who, back in 1926, helped Jack Frye and Paul E. Richter in the formation of the Aero Corporation of California, Inc., a predecessor company of TWA, has rejoined the airline's executive staff, it was announced in Kansas City by Mr. Richter, executive vice president.

* * *

The annual convention of the Missouri Society of Professional Engineers was in the Hotel Statler, St. Louis, December 1st and 2nd. The St. Louis and St. Louis County members were the hosts on this occasion. The first day of the convention was taken up very largely with addresses on topics of lively interest to Professional Engineers. The Board of Directors meet on Friday evening preceding the opening of the convention. Business sessions of the convention were held on the morning of December 2nd.

NEW ENGLAND

Some sixty New England manufacturers and research engineers participated in a New England-wide engineering and research forum dinner at the Boston City Club Wednesday night, November 14, under the joint auspices of the Engineering Societies of New England, Inc., and the New England Industrial Development Corporation. Using the theme, "Production Engineering and Research for New England Industry," William L. Stoddard, President of the New England Industrial Development Corporation, opened the session by describing the meeting as "an experiment in atomic integration." He pointed out that for an industrial society to be dynamic it must thoroughly integrate all of its human elements.

Industry and management was represented by Richard W. Moulton of the New England Confectionery Company, who stressed the fact that the need for research to improve products and processes was not sufficient.

NEW JERSEY

James F. Kelly, President of the State Board, and former President of the Hudson County Chapter, has been elected vice-president of the New Jersey Association Housing Authority.

* * *

The time and place of New Jersey's 22nd Annual Convention have been changed to March 15th and 16th, at Newark, instead of as previously announced at Elizabeth on January 26th and 27th.

* * *

The Mercer Chapter has enrolled 16 new members in 30 days. A good part of the credit goes to Secretary Russell and Membership Chairman Nicolaysen, according to our information. Engineer Howard, past president of Mercer Chapter, has been elected Secretary of the Master Builders' Exchange of Trenton.

* * *

State vice-president Alonzo Jones has been appointed to the Advisory Committee of the National Rivers and Harbors Congress.

* * *

Bouquets are going to Engineer Edward R. Hardie, membership chairman of the Union Chapter. Union Chapter is very new, has just signed up its 109th member, placing that Chapter fourth in States membership.

* * *

Teaneck has passed an ordinance under which the Building Inspector must be either a licensed Professional Engineer, or a registered Architect. Hoboken proposes to organize a Bureau of Engineering. All this is great news, for it shows that the authorities are beginning to realize that certain positions, the duties of which call for technical and professional training and experience, can be properly filled only by a professional who is recognized by the State through its licensing laws. The members of the State Boards of Registered Architects and Professional Engineers and Land Surveyors are to be highly commended for their joint and harmonious endeavors on this subject.

Said the economist: "Machines don't destroy jobs, they create more and better paid ones." Replied the equipment salesman: "I never would be able to sell my product, using that argument."

NEW YORK

Walter A. Maggiolo, United States Commissioner of Conciliation spoke on the subject of the work being performed by the U. S. Conciliation Service in mediating disputes between Labor and Management, before the New York County Chapter of Professional Engineers, on December 6th.

When management and labor fail to reach an agreement on their own, and are stalemated, it is the Conciliation Commissioner's job to sit down with both parties to the dispute and endeavor to work out a formula that will be acceptable to both. In cases where one or both sides are inflexible, as often happens, a high degree of diplomacy and resourcefulness, plus a wealth of experience in such matters is required by the Conciliation Commissioner, if a workable settlement of differences is to be negotiated.

The U. S. Conciliation Service was established in President Taft's administration and has the enviable record of settling 83 per cent of the disputes which have come before it.

Commissioner Maggiolo has taught Labor Law and Industrial Relations at many labor schools. At present, he is a lecturer in the Institute of Industrial Relations at Holy Cross College, where he has established the now well known "Grievance Clinic." He is the author of several studies of Federal and State mediation and arbitration procedures and practices.

* * *

Dr. D. B. Steinman addressed the New York County Chapter of Professional Engineers on January 10th. His topic was: "Beauty in the Bridges."

* * *

On Friday evening, December 7th, at the Hotel McAlpin, Professional Engineers of the New York County Chapter tendered a testimonial dinner to Engineer Arthur J. Benline. Commander Benline has just returned from Navy Engineer Corps operations in the Pacific area. Among his many decorations is that of the Purple Heart. He has many friends in and around New York, and will be remembered as the Chairman of the Chapter's 1942 convention committee.

* * *

We learn with regret of the passing of Engineer Harry A. Leeuw, a member of the New York County Chapter and former Chief Engineer with Allen N. Spooner & Sons, Inc.

* * *

It has been announced that Engineer and member Newell L. Nussbaum has been appointed by the New York State Board of Regents to membership on the State Board of Examiners of Professional Engineers and Land Surveyors.

* * *

Mr. Frank Duck has been appointed Executive Secretary of the N. Y. State Society, effective December 1, 1945. Mr. Duck is a graduate of Lehigh University as a mechanical engineer. He attended Yale University and has had considerable experience in trade association work.

* * *

The New York State annual dues, beginning January 1st, 1946, will be $10.

* * *

It has been announced that the Onondaga Chapter will, in the future, be known as the "Central New York Chapter."

* * *

Engineers William H. Larkin (Richmond) and L. R. Post (Broome) have been elected New York Directors in the National Society of Professional Engineers for 1946.

N. Y. State Board of Examiners of Professional Engineers

The 258th meeting of the New York State Board of Examiners for Professional Engineers was held in New York City on December 13. A total of 131 applications were considered at this meeting, following prior review by the individual members of the Board, and 4 candidates were interviewed. Of the total number, 11 were assigned to the Preliminary Examinations and 74 were assigned to the Final Examinations.

Mr. Newell L. Nussbaumer (Member N.S.P.E. and Am.Soc.C.E.) of Buffalo is a new member of the Board, succeeding Dr. Norman R. Gibson.

The following officers were elected for 1946:

David B. Steinman—Chairman.
Irving K. Peck—Vice-chairman.
Roy G. Finch—Secretary.

James F. Fairman Given Promotion

At a meeting of the Board of Trustees of Consolidated Edison Company of New York, Inc., December 26, James F. Fairman was elected vice-president in charge of production and operation. Mr. Fairman has been assistant vice-president for design, inventory, testing, purchasing and stores. Production and operation have heretofore been under the jurisdiction of Executive Vice-President Hudson R. Searing.

Mr. Fairman has been with the Consolidated Edison System Companies since 1925. He was with Brooklyn Edison Company until 1937 when he was transferred to Consolidated Edison. Mr. Fairman is a vice-president of the American Institute of Electrical Engineers, vice-president northeastern zone, of the National Society of Professional Engineers and a past president of the New York State Society of Professional Engineers.

OHIO—

Akron, Canton, and North Central Chapters passed their quota in November for "4000 in '45." CONGRATULATIONS! Many other Chapters will reach their assignment during December.

Excellent progress has been shown by all Chapters in our membership drive during the past 2 months. This same interest should be carried on to the time of our Convention in February. Your Chapter will be given credit toward its assigned quota if new applications are filed with Secretary Chacey before the Convention.

Engineer Bauer, President of the Cleveland Chapter, tells me he received numerous telephone calls requesting membership application blanks due to interest developed by the NSPE Annual Meeting which was held in Cleveland.

Chairman Moellenkamp reported that with a gain of 122 new members in November, the total membership had now reached 2810. The chairman then pointed out that the Akron, Canton, and North Central Chapters had met their quotas. He also emphasized the fact that all delinquent members on January 1 would count against chapters and might wipe out all of the gain in some chapters.

Over 400 applications for Registration were received in the month of October. Over 800 applications were received in November. With December 31 there comes the end of the exemptions from examinations for all applicants for registration in Ohio.

NOMINATIONS—Chairman Marco has submitted the following names for 1946: President, A. C. Neff and C. E. Pettis; Vice President, A. H. Moellenkamp, Alfred Le Feber, John Coleman and Fred Hubbard; Secretary, D. W. Converse; and Treasurer, J. R. Shank.

Briefs of Interesting Articles

"Science, Politics and Humanity"

Under the above heading the editor of Chemical and Metallurgical Engineering, in the November issue, has some significant things to say about the current conflict between scientists and politicians growing out of the atomic bomb discussions. This editor quotes some wag as having said that, "with the release of atomic energy, all scientists want to become politicians, and all politicians, scientists."

Commenting on this, the editorial states in part: "On their record to date, the scientists have been none too successful with their political proposals, while the politicians seem to have increasing difficulty in organizing their facts—scientific and otherwise. The international politician turns into a rank isolationist when asked about any sharing of our 'bomb secrets.' The scientist, on the other hand, emerges from his monastic isolation suddenly to become a rabid internationalist, who would give away his national sovereignty."

After quoting Columnist Peter Edson to the effect that Congress has been trying to mix "pure" science with "pure" politics, the editorial comments: "This leads us to wonder whether 'pure' science can mix with 'impure' politics—and with what result."

We think this editor has hit the nail squarely on the head. The term "politics" is currently applied to the ideas and activities of men who may actually range all the way from an Abraham Lincoln, down to the utter prostitution of a "Hinky-Dink" or a "Bath-House John". One thing may be truly said of science, that while its representatives may be of varying degrees of competence, it is very seldom that any of them are for sale.

Is This Your Phobia?

"Are engineers Neophobiacs?", asks the editor of the National Engineer in the November issue of that publication. This editorial explains in some detail that a "neophobiac" is one who fears or dislikes that which is unfamiliar, new, or out of the ordinary.

Commenting on the historical background of neophobiacs, the editorial recalls that they "fought the mechanization of industry, even when it was giving them the highest standard of living, shorter hours, and more pleasures than the men in any other nation ever known."

By way of suggesting how engineers may avoid this particular type of phobia, a very good practical suggestion is made: "A lot of engineers will have to take a more active interest and part in their engineering societies, if they want to stay in the front lines of the parade. This is more important today than it has been at any time in the evolution of engineering and machinery. Furthermore, the engineers will have to master the art of providing information in a much better manner than they are doing at present.

"And if engineering associations are going to render real service to members, the cost will go up—which may mean more dues. Wages have gone up to double and triple that which was the average level at the turn of the century."

If we get the full implications involved, this means that if you think NSPE dues shouldn't be increased, you're a "neophobiac!"

Can Management Be Shared?

"Democracy" is quite a "word." Just about everybody believes in some degree of it—at least so long as it doesn't cut in on his own prerogatives. Unfortunately there seems to be no widely accepted definition of the term, nor is there any clean-cut understanding as to the fields in which democratically arrived at decisions are supposed to be desirable. It is probable that businessmen generally feel that democracy is a fine doctrine in the field of politics, but decidedly impractical in the field of business management. We believe there is need for some clear thinking for the purpose of determining at what point in human relations democracy starts being a good thing, and just at what point it becomes no longer desirable.

This subject is discussed editorially in the November 22nd issue of The American Machinist, under the title, "Management Cannot Be Shared." The viewpoint expressed may be gained from these partial excerpts: "The management function of industry rests with management alone. By its nature it cannot be shared with anyone else. If it is shared, it means divided authority; and divided authority results in rapid disintegration of shop discipline, high cost of production and general inefficiency . . .

"Self-interest alone should impel local and national labor officials to leave management's functions to management."

A Move to Aid Construction

The federal government apparently is becoming "Fact Conscious" as is indicated by a number of recent developments. In the November 29th issue of the Engineering News-Record, there appears a noteworthy comment on one such aspect, that of the U. S. Department of Commerce's newly created special division to coordinate data from both government and private agencies on various phases of the construction industry.

Says the editorial referred to: "If the hoped-for yearly construction volume of $15 billion or more is to be reached and maintained, the industry will need much more and better informational assistance from the federal government than has been previously available.

"And if the Murray full-employment bill or something similar should become law, the federal government will require for itself the very best of statistical aids. Since no federal agency at present attempts to combine data covering all the ramifications of construction, the establishment of the new division in the Department of Commerce appears logical."

The editorial concludes with the further implied hope that an adequate appropriation for this work can be secured. Pertinent facts and figures in relation to current problems are one of the most pressing needs of both government and industry, and never more so than at the present time.

Book Reviews

ROLLING BEARINGS

By R. K. Allan

This book is a comprehensive, detailed and authoritative work covering every aspect of the theory and practice of ball and roller bearings. It includes a full account of the historical side, develops the Hertzian theory as specifically applied to bearings, and deals fully with the work of Stribeck, Goodman, and Palmgren. Formulae are arranged in a suitable and convenient way for practical use.

The book is profusely illustrated and contains many tables pertinent to the subject treated. There is also an extensive bibliography and index making reference to any desired subject matter easy.

The book also covers relative movement, resolution of forces, typical design and details, and matters relating to use, maintenance and repair.

This is unquestionably a very important reference work for designing engineers, plant and maintenance engineers, draftsmen and others interested in this important branch of engineering.

446 pages, Cloth, 5½ x 8¾, Illustrated $8.50
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ATOMIC ENERGY IN WAR AND PEACE

By Gessner G. Hawley and Sigmund W. Leifson

The object of the authors in the preparation of this book was to present essential facts only, and in this they have been eminently successful. The first portion is devoted to the atom, neutrons, energy transformations, combustion, explosions, radioactivity, transmutation, nuclear fission, and other subjects of fundamental importance.

The second portion, based on the official War Department report of the atomic bomb project, gives the complete story of this phenomenal piece of work — of the terrific obstacles to success — of the means used to surmount them.

A concluding section discusses future military and industrial applications of atomic energy in the light of present knowledge. The entire account is stripped of unnecessary detail and concentrated on the main object — to explain the nature and uses of this revolutionary new force.

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VAPOR ADSORPTION

By Edward Ledoux

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Static adsorption is studied only from the engineer's viewpoint, who is really more interested in the next step, which is industrial dynamic adsorption, a vast field he has to explore for himself.

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HANDBOOK OF NONFERROUS METALLURGY RECOVERY OF THE METALS

By Donald M. Liddell, Editor-in-Chief

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By Bernhardt G. A. Skrotzki and William A. Vopat

The authors of this text in power plant engineering cover the equipment and economics of industrial and central station power plants, describing the characteristics and performances of the major elements, and discussing the coordination of equipment for the generation of energy from a physical and economic viewpoint. No attempt has been made to present an extensive treatment of structural details or design. The newer developments in gas turbines and wind turbines, as well as special and European types of steam generators are included. Features of the book are the thorough presentation of engineering economics and informative bibliographies which appear at the end of each individual section.

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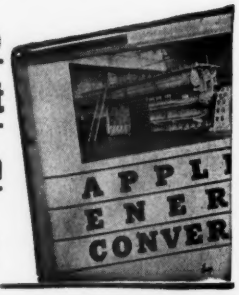

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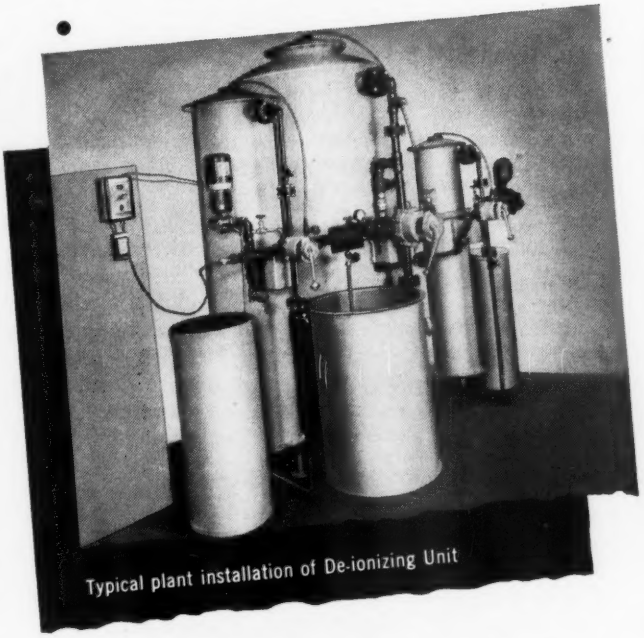

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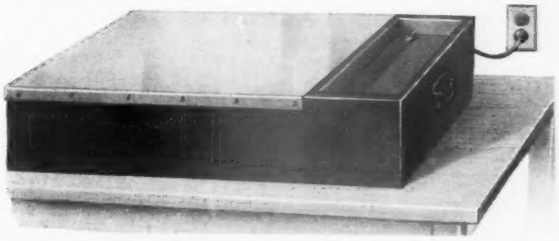

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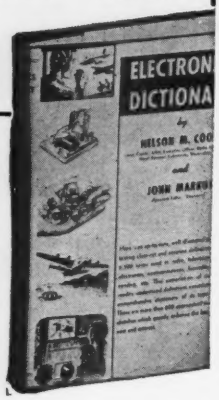

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AE—1-46

PROPORTIONING PUMP

This Proportioning Pump is designed for heavy duty chemical solution feeding against high pressures up to 5000 psi., with a constant, manually adjustable rate of feed. It is a horizontal, direct motor drive, positive displacement, reciprocating diaphragm type chemical proportioning pump. Corrosion-free materials are used in the construction of the reagent heads, which include an exclusive hydraulically-balanced diaphragm. This diaphragm is actuated by piston displacement through a hydraulic fluid. Displacement is accurately measured by the piston in the cylinder. There is no mechanical connection or pressure differential against the diaphragm at any time. Packing glands are eliminated. Chemical solution is completely isolated from operating parts. Nothing can leak or corrode.

Micrometer stroke adjustment of the piston permits adjustment of rate of flow from zero to full maximum, while the machine is in operation, with accuracy of flow maintained throughout a range from minimum to maximum of 1:100. Motion is transmitted to the piston by an oscillating arm which utilizes full motor power without friction or vibration. Piston drive transmission assembly is sealed in a heavy-duty cast iron housing, submerged in an oil bath. Machine is equipped with Timken roller bearings. All types of motors can be supplied including drip, vapor, explosion and chemical-proof types.

The pumps are available with one reagent head for single feed or two reagent heads for feeding two chemical solutions simultaneously. On duplex units the two reagent heads are driven from a single motor and may be adjusted while in operation to a uniformly synchronized rate of flow or to varying rates of flow. Five sizes are manufactured which provides a selection of capacities ranging from a few cc per hour to 10 gallons per hour.

For further information, address American Engineer, reference No. 453.

AIR SEPARATOR

This 4-page, 2-color bulletin which has just come off the press describes the need for clean dry air for the protection of all kinds of pneumatic equipment. It also describes and illustrates a recently developed Air Separator and Trap for users of compressed air tools and operations.

For further information, address American Engineer, reference No. 454.

FLAME-FAILURE SAFEGUARD

This Flame-Failure safeguard is designed to provide explosion protection for all industrial and commercial oil and pulverized coal burners. It is photoelectric and therefore actually *sees* flame. When flame fails, it instantly cuts off fuel and sounds an alarm. Unlike thermal controls, it is actuated not by the effect of flame failure but by flame itself. Its action is positive, instantaneous, electronic. It consists of a phototube and amplifying system, housed in a dust-tight aluminum case. The entire control is mounted directly on the furnace wall and is aligned in a manner which permits the photoelectric cell to observe the flame through a 2″ pipe connection which serves as both a sighting tube and a support for the equipment.

This simplified installation is made possible by the unique design features of the control. A clear pyrex filter keeps the equipment dust-tight and is mounted on a hinged shutter which permits it to be cleaned without shutdown. A heat-absorbing filter in the lens system, as well as an effiicient baffle system protects the instrument from all radiated heat. The specially designed phototube permits operation at high ambient temperature.

For further information, address American Engineer, reference No. 455.

HAND FIRE EXTINGUISHER

A new carbon dioxide hand fire extinguisher with unique design and quick operating features developed during the war is announced.

Made to meet the full approval of fire underwriters, the container holds four pounds of carbon dioxide and comes with a carrying handle and control button designed for fast operation. It can be easily carried in one hand, with the thumb of the carrying hand operating the push button. A horn swivel quickly raises or lowers as needed, remaining in lower position when attached to the wall rack furnished with each extinguisher, together with a quick release chain.

Painted vivid orange and black for high visibility, the extinguisher may be recharged at regular refill service establishments.

For further information, address American Engineer, reference No. 456.

If the money spent on the war, or even that spent on the atomic bomb, had been spent wisely in research on how to better the lot of human beings everywhere, we might have avoided that tragedy.

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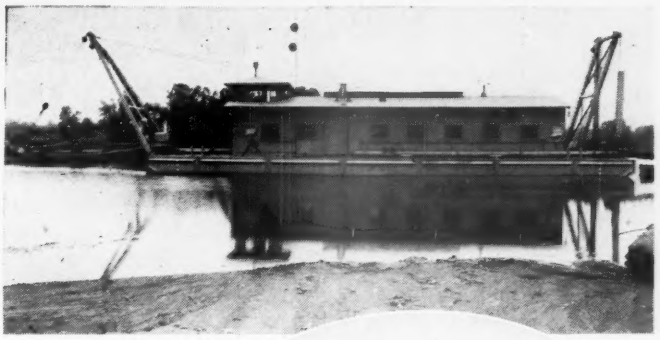

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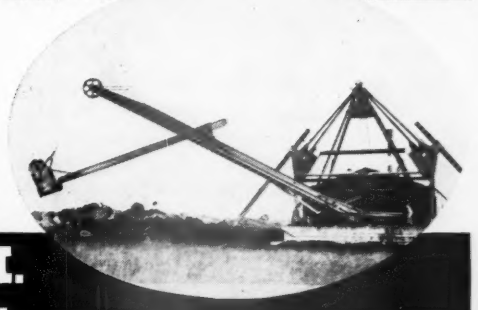

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CONCRETE PAVING SPREADER

Twelve exclusive features of this concrete paving spreader make it one of the outstanding developments of paving construction equipment since the advent of the finishing machine more than 25 years ago.

These exclusive improvements are described in detail in a booklet published by the Blaw-Knox Company, entitled Catalog No. 2046, which may be obtained by writing the Advertising Department, Blaw-Knox Company, Pittsburgh, Pa.

The new spreader should be of interest to road-builders and construction engineers, who are now getting ready to resume the country's road and airport construction program which was interrupted by the war, as it not only speeds up paving construction operations, but does higher quality work at lower cost, according to the manufacturer.

Specifications for concrete paving projects have progressively required drier concrete. These dry, harsh mixes are extremely difficult to handle or spread, whether by hand or with makeshift tools. The Blaw-Knox concrete paving spreader has provided a complete mechanical solution to this problem.

It moves the concrete longitudinally and transversely at the same time, and the booklet states, it is the only concrete spreader to do so. It is furthermore the only spreader that spreads the concrete automatically regardless of where the concrete is placed on the subgrade.

Narrow spreaders are convertible to wide spreaders, and vice versa, thus increasing the versatility of the machine. The paving spreader simplifies and expedites the job of the finishing machine. It spreads concrete uniformly to the width and elevation required, without disturbing pre-installed joints, and it does not interfere with mesh reinforcing and other appurtenances incorporated in the concrete slab.

When the same manufacturer's vibratory paving attachment is added to the paving spreader, the complete machine, operated by only one man, not only spreads the concrete as required, but simultaneously consolidates and compacts the concrete ready for the finishing machine operation.

For further information, address American Engineer, reference No. 457.

WIDE-UTILITY LEAD HAMMER

Utilizing an entirely new principle of hammer design, this hand tool meets a wide range of requirements.

It is made of virgin tellurium lead with an antimonial content which minimizes wear, and practically eliminates danger from flying chips and splinters as the head actually toughens with use. It will not blemish contacting metal surfaces.

Shaft is a double-steel rod—cadmium plated to avoid rust—and offers extra strength by the duplicate construction. Welded cross members on both ends absorb shock and impact, thus protecting hands of user from vibration of blows. Handle is of durable plastic, serrated for sure grip, and with safety bulge at end to prevent hammer from slipping from hands. Head and handle are securely fixed—unique construction prevents loosening. Hammer is designed for use with one or two hands.

Specifications: Weight of head, 5 lbs.; head size 4¾" by 2"; handle length 7"; Overall length 16".

For further information, address American Engineer, reference No. 458.

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Construction Engineer and Battalion Lieutenant, U. S. Navy — 3 years.

Building Construction, including foundation work — 4 years.

Maintenance Dept. Penn. R. R. — 6 years.

College Graduate — (B. S.) 38 years old. Married.

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c/o American Engineer

CABLE AND PIPE LOCATOR

Equipment for accurately and rapidly locating the position of buried pipe and cable is now available. In addition to its ability to locate shorts, crosses, grounds and wet spots the new instrument adds finding ability of most practicable service. In simple operation it tells just where buried cable or pipe is buried, and just how deep. It finds old cable or pipe laid many years before and on which installation records have been lost or forgotten. It locates the exact path of cable or pipe to or from buildings; finds position of a water main in street or alley; has a lamp circuit for checking all connections after test has been set up. It determines whether or not a service pipe is below the frost line when lowering or regrading a thoroughfare. It is also valuable in locating cable or pipe lines when recharting a town or district.

It is furnished with detector coil and neutral exploring coil. Built-in level in coil enables the operator to maintain absolute accuracy.

For further information, address American Engineer, reference No. 459.

NEW FLUORESCENT LAMP

Vast improvements in office, commercial and industrial lighting are held forth in the sensational New Fluorescent Lamp which has just been put into production.

Revolutionary developments in fluorescent lighting will make possible a brighter yet more mellow light, double lamp life, and instant illumination, features that make not only for substantial maintenance savings, but for greater efficiency and quick, dependable action.

Timed to meet the urgent needs of the reconversion period, production of this new lamp is being earmarked at the outset solely for commercial and industrial users.

Laboratory tests in the 40-watt size reveal that the new color gives 20 per cent more light than the standard white fluorescent and 40 per cent more light than the standard daylight fluorescent. Tests further show that this lamp boasts a 5,000-hour life as against the 2,500-hour rated life of the standard lamp.

The feature of instant-light achieved in this lamp will eliminate completely the need for the use of starters and will do away with the annoying, time-consuming flickering that attended turning on the standard fluorescent installations.

The lamp burns with a restful radiance described by company engineers as safreen—which gave the product its name. The light actually represents a skillful blending of saffron with a touch of green, obtained in the treatment of the luminescent powders that coat the lamp's interior.

For further information, address American Engineer, reference No. 460.

STEAM TRAPS

A new series of industrial steam traps of the inverted bucket type is announced. Features include a new, scientifically designed orifice throat which gives up to 25% greater capacity, avoids turbulence, and minimizes choking caused by flash steam. The screwed-in valve seat is renewable for easy servicing. A new lever construction gives quick, full opening without dribbling.

The straight through inlet-outlet connections have been relocated to replace the trap below the inlet pipe at all times. The traps are available in 3 body sizes up to 1¼" in both standard and thermal design.

For further information, address American Engineer, reference No. 461.

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AE—1-46

Van Leer's Address

(*Continued from Page* 10)

ing problems where your knowledge and experience and advice would be of great value to them. We ought to take an active part in local politics.

Why Politics Are "Bad"

I know that some of you will say, "Well, the local politics in my community are so bad I'd feel I'd get my hands dirty if I fooled with them." Well, they will continue to be that way unless some decent, reputable citizens in those local communities get in and show an interest and work at these things. Most of these faults and sins arise from failure of somebody there to have your and my ideals and to take an active interest to see that the direction is something other than it is.

I should like to give you another meaning for your NSPE. You might say that as far as the professional engineer is concerned that NSPE stands for "noble service to the public economy." I think that if you encourage that throughout our various branches and sections, it would stimulate some more of them to serve on the school boards, serve on the committees, and serve on the various civic organizations of which many of them are members.

To "Know" is Not Enough

Now, a great teacher has said, "Happy are you if you know these things, but blessed are you if you do them." I hope that the National Society of Professional Engineers and professional engineers all over the country will accept the challenge of this age and assume real outstanding leadership so that our symbols, our initials, will have even a further meaning, that the NSPE, the National Society of Professional Engineers, will mean "Noble service and power evermore." (Applause).

GUIDE FOR PIPE USERS

A new 54-page catalog featuring applications of light-weight pipe in diameters from 4 to 30 inches has just been issued. Illustrated throughout this book are installations showing the application of pipe in the many fields in which light-weight pipe is used to advantage. Along with valuable data on pipe structure are sections on precision fabrication and pipe connections including an entirely new type of coupling which saves time and labor for users.

For further information, address American Engineer, reference No. 462.

Legislative Report

(*Continued from Page* 20)

Which taken at the flood leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat,
And we must take the current when it serves,
Or lose our ventures."

If we had asked Shakespeare to write this for us today, he could have spoken no truer word as it applies to the National Society of Professional Engineers as we stand at the crossroads of our destiny.

THE TIDE WAITS FOR NO ONE —OUR TIME IS HERE NOW—1947 MAY BE TOO LATE. ARE WE GOING TO ACCEPT THE CHALLENGE?

Ray M. Fuller, Chairman,
Legislative Committee.

WHITE LIGHT CONDITIONING BULB

These White Light Conditioning Bulbs which the makers compare with the tungsten lamp of 1906 and the clear lamp of 1919, and as the most important development since the inside frosted lamp of 1925 are now available for civilian use. A new process they state, treats the glass on the inside of the bulb to diffuse the central glare point caused by the concentrated filament, with the result that the direct raw light rays are broken up into millions of softer "counter diffusing" light rays that glow evenly over the entire bulb surface, without sacrifice of visible illumination.

It is stated that over forty million Light Conditioning Bulbs of this type have been tested in use over the past five war years, and that substantial shipments are already being diverted to civilian outlets now that Government purchasing has been curtailed. Ten sizes from 10 to 200 watts will be made in 115, 120 and 125 volts, with four sizes from 25 to 150 watts in 220, 230, 240 and 250 volts. Other bulbs being announced by the same firm include new types of photoflash bulbs and other photographic lighting units, ultra-violet and infra-red heat lamps.

For further information, address American Engineer, reference No. 463.

ELECTRICAL INDICATING INSTRUMENTS

This 28-page book illustrates and describes a line of standard and hermetically sealed Electrical Indicating Instruments, including the very latest and up-to-date developments in the instrument field.

An interesting section of this catalogue is intended as a guide to prospective purchasers of electrical indicating instruments. This section incorporates detailed explanations of the specific indications for certain instruments in general, and points out the specific indications for certain instruments, thus assuring the buyer that he will obtain the right instrument for his equipment.

The catalogue further shows the development of instruments at this manufacturer's plant, various production procedures and the rigid tests to which the instruments are subjected during manufacture to insure the highest possible efficiency and satisfaction during use.

For further information, address American Engineer, reference No. 464.

"HOW TO DETECT AND CORRECT PAVEMENT SLAB PUMPING"

One of the most pressing problems facing the street, highway and airport maintenance engineer today—detection and prevention of pavement slab pumping—is fully discussed in a 20-page booklet just published.

The booklet, entitled "How to Detect and Correct Pavement Slab Pumping," describes—and with numerous pictures effectively illustrates—the early stages of slab pumping and goes on to outline the preventive Mud-Jack treatment adopted by many states and municipalities to combat pavement slab pumping in its early stages.

Author of the booklet is J. E. Chadwick, Jr., who, as research maintenance engineer for the Missouri State Highway Department, was for a number of years closely associated with Mud-Jack treatments for slab pumping in Missouri.

For further information, address American Engineer, reference No. 465.

WELDED PRESSURE VESSELS

A 28-page illustrated bulletin, listing and describing a number of welded products fabricated from open-hearth, stainless, alloy and clad steels for the chemical, refining and steel industries, was published recently and is now available.

For further information, address American Engineer, reference No. 466.